

Ngqura manganese terminal a go

TRANSNET has talked about developing a manganese export terminal at the Port of Ngqura since 2011. It could become a reality. Earlier this year, Transnet Port Terminals Eastern Cape managing executive, Wandisa Vazi said that an announcement in this regard "is expected soon". In a media update issued on 26 July, Transnet GCEO, Michelle Phillips included the development of a manganese export terminal at Ngqura in her list of current projects.

She said that Transnet currently exports manganese through various channels, primarily to the Ports of Saldanha and Port Elizabeth, which together handle 15.5 million tons per annum

(Mtpa) of manganese exports. "The Ngqura Manganese Export Terminal (NMET) Project is an undertaking by Transnet to relocate and consolidate manganese exports from the bulk terminal at the Port of Port Elizabeth to the Port of Ngqura whilst at the same time expanding NMET's capacity to an initial 16Mtpa. Transnet will seek a private sector partner to assist in funding the design and construction of NMET. This partnership is crucial for improving operational efficiencies, business liquidity, and overall execution of logistics operations."

Manganese is currently loaded at the Port of Port Elizabeth via skiptanners which are loaded from manganese stored in open

stockyards. Apart from the dust, it is a time-consuming method. For example, to load 55,000 metric tons of ore, a ship is docked for eight days. A purpose-built terminal will significantly cut this loading time and save miners costs.

A concomitant effect of faster ship loading is the need for more rapid ore delivery to the port. In her update, Phillips outlined the progress made in creating a legislative and policy framework which paves the way for third party access to Transnet's rail system. "Transnet looks forward to the publication of the final network statement and proposed tariff methodology to open slots for third party access by 30 September 2024," she said.

Transnet's 'landlord division',

Transnet National Ports Authority (TNPA) is also being shaken up and "corporatised". This sets the scene for a more competitive terminal operating environment. Phillips said, "The corporatisation will establish TNPA as a financially autonomous entity capable of generating its own revenue, attract increased investments to improve the efficiency and positioning of SA ports to enhance competitive maritime trade and create appropriate partnerships. It will also, through its independence, enhance terminal licence oversight and align with international standards and regulations governing port authorities and ensure compliance with South African maritime and port regulations."



Port of Ngqura: Berts C100 and C101 to convert to dry bulk for manganese (Source: Transnet Port Development Framework Plans 2022 Update, P2-44, 51)



Paul Gorremans, managing director and his team at Sustainable Heating, led a tour of the state-of-the-art facility, showcasing the advanced technology and environmental benefits of the new biomass steam plant.

ASPEN South Africa's flagship manufacturing site in Gqeberha will reduce its carbon emissions by thousands of tons by switching to steam generated from a biomass steam plant. Sustainable Heating took about two years to implement the plant which it funded and built and operates to

sell steam back to Aspen at a cost per ton.

The new installation boasts a capacity of 12 MWh thermal energy, supplying 20 tons of steam per hour. Over the next 15 years, the Aspen facility is projected to save approximately 550,000 tons of carbon emissions, underscoring the long-term

Biomass steam sterilises at pharma facility

environmental and economic benefits of the project.

Recent studies highlight the advantages of biomass over fossil fuels, particularly in terms of reduced greenhouse gas emissions and improved air quality. The plant's advanced filtration system further enhances its environmental credentials, ensuring cleaner steam production compared to conventional fuel-based methods.

"We are thrilled to launch this cutting-edge biomass steam plant, which marks a significant milestone in our journey towards a more sustainable future," said Paul Gorremans, managing director at Sustainable Heating. "Our commitment to reducing carbon footprints and enhancing energy efficiency is at the core of our operations, and this new facility exemplifies that dedication."

International pressure to shift to carbon-neutral energy generation is driving increasing demand for sus-

tainable heating solutions. The biomass steam plant at Aspen is a good example of how Industrial-scale process heat can be generated from biomass feedstocks.

The steam plant is fuelled by woodchips which are sourced from Sustainable Heating's chipping facility. Other sources of biomass feedstocks are wood pellets, wood shavings or residues, energy crops or empty fruit bunches (EFB), such as shell fibre from oil palm production. Refuse-derived fuel (RFD) can also be used from municipal, industrial, or agricultural waste.

Gorremans says that the feedstock must be within a 100 km radius of the plant, otherwise the carbon emissions generated by transportation cancel out the environmental gains, not to mention the cost.

In an interview with the SABC, Gorremans said that the company has about 12 biomass boilers running in South Africa - in Cape Town,

Durban and in Gqeberha.

He said the benefits of the plants include a reduction in the generation of greenhouse gas emissions, a lower cost to the client to produce steam and a reduction in waste that goes to landfill.

He explained that Sustainable Heating's current business model is capital-intensive and suits plants with a 24/7 demand for steam. The company finances the plant build and operation and provides steam to the client at a cost per ton over an agreed period from around 10 to 30 years. Gorremans said companies need to invest with a long-term horizon.

The company's current business model, Gorremans said, is not suitable for smaller-scale applications as the capital investment required is too high to deliver a suitable return.

The company is, however, exploring options with an Austrian supplier to provide smaller-scale solutions.

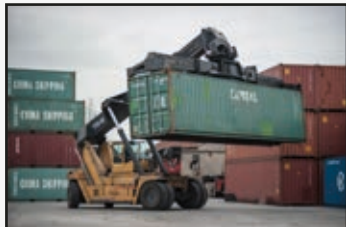
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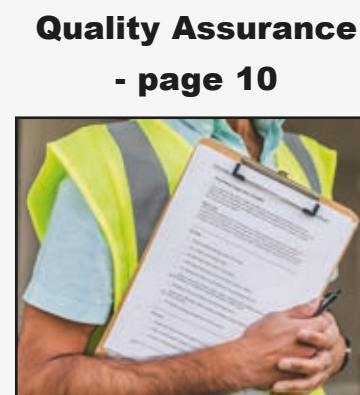
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Multi-million rand connectivity investment into the 'three bays'

VODACOM Eastern Cape region is spending R500 million this financial year on modernising the network, energy projects and accelerating broadband coverage across the region, particularly in townships and deep rural areas of the province. This investment forms part of the company's commitment to drive digital inclusion in the communities in which it operates.

According to Vodacom, the region invested more than R500 million in the 2023/4 financial year, and in 2024/5, it is going to spend an additional R500 million, on extending broadband coverage throughout the province.

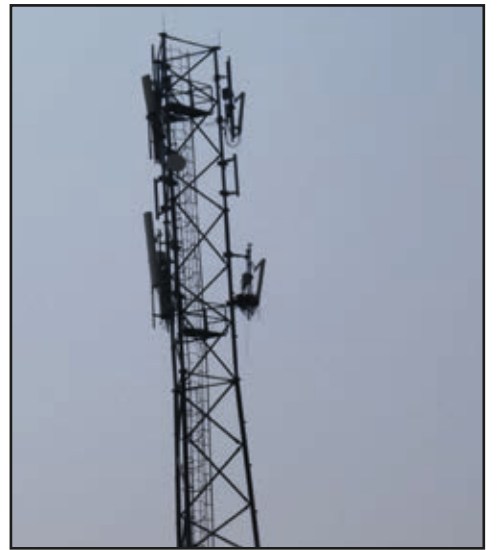
The bulk of the expenditure will go towards

modernising the network infrastructure, followed by deploying new network sites, rolling out 5G network, and launching new LTE coverage, utilising the allotted spectrum from ICASA. This rollout will enable better connectivity and improved network speeds for the end user.

The region plans to focus this investment on the three bays of the Eastern Cape footprint. This includes Lower Bay (Gqeberha to Makhanda and the Port Alfred area); Central Bay (sites along the N10 and surroundings); and Upper Bay (Qonce, Monti and up to the Kei Mouth area), bridging the digital divide between urban and rural areas of the province.

Zakhele Jiyane, managing executive for Vodacom Eastern Cape Region commented: "Our approach is to first build on our infrastructure to ensure that we can unlock the many opportunities afforded by the latest technology, such as 5G, and deliver a quality network experience for all our customers. In some areas of the province, this investment will bring connectivity to communities for the first time, driving our ambition of empowering people in an inclusive digital society."

"One of the big focus areas for the region this financial year is to deploy more sites in deep rural areas of the Eastern Cape. Many individuals in South Africa's remote, deep rural



areas lack internet access, which prevents them from taking advantage of the socio-economic advantages of connectivity. The deployment of the new base station sites in deep rural areas of the province will close the digital divide and enable hundreds of thousands of people in these villages to be part of the digital economy and reap associated socio-economic benefits."

To mitigate the risks of increasing theft and vandalism at sites, as well as power disruptions on the national grid, Vodacom Eastern Cape is channelling tens of millions of rands into security upgrades and more millions will be invested in enhancing backup power supply at base station towers. These efforts will ensure network availability, to keep customers connected.

Acknowledging that the cost to communicate is a critical issue for customers under economic pressure, Vodacom Eastern Cape introduced personalised discounted voice and data offers, such as Just4You and Just4YourTown bundles, for residents in certain towns in the region to make connectivity more affordable. The offers start from as little as R5 for 150 MB + 30 minutes with bigger prepaid LTE data bundles including 1 GB for R19, as well as Vodacom to Vodacom unlimited voice minutes for R29.

Vodacom continues to support educational initiatives that foster young people's potential and contribute to socioeconomic development in the Eastern Cape. For example, the region has helped to decommission pit latrine toilets and hand over new ablution facilities at Ilitha LeThu Preschool in Lusikisiki. To encourage youth participation in the digital economy, Vodacom has rolled out Connected Farmer, a platform to empower small-scale agricultural producers, to 100 schools in the province.

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Lemon processing plant sets up at Coega

THE Coega Development Corporation welcomed San Miguel Global's newest processing plant to the Coega Special Economic Zone (SEZ) on 23 July. Situated in the Zone 3 General Manufacturing Cluster of the SEZ, the plant will focus on lemon processing and extraction for various end products.

With an investment value of approximately R490 million, the Gqeberha plant aims to achieve 100,000 tons of lemon grinding annually by 2030 with its local partner African Pioneer Group. These natural ingredients will then be distributed to more than 200 customers in over 50 countries. In terms of its

socioeconomic impact, the facility directly employs 120 people and is expected to create 250 indirect jobs in the local community.

Coega's senior business development manager, Johan Fourie, explains that the Eastern Cape's citrus industry boasts significant potential for growth that would have a cascading impact on the socioeconomic development of the region.

"The Eastern Cape citrus industry has the potential to diversify the economy and create many jobs. Existing export channels and a strong reputation create a solid foundation for further growth," says Fourie.

The Eastern Cape is the sec-

ond-largest citrus producer in South Africa, which is the world's second-largest exporter of citrus fruit. Supported by well-established infrastructure and expertise, the Eastern Cape region contributes significantly to the success of the industry.

Chief executive officer of San Miguel Global, Pablo Pla, explains that the facility forms part of San Miguel Global's Strategic Redirection Process. With lemon processing facilities in Argentina, Uruguay and now South Africa, San Miguel has reinforced its position as a multi-national leader in agro-processing.



Images courtesy of San Miguel

"The facility marks a significant milestone in San Miguel's history. Our new industrial lemon processing plant in Coega is designed to produce high-quality natural ingredients such as lemon essential oil, concentrated juice, and peel for industrial and animal feed use.

"This project not only strengthens our position as the world's top pro-

cessor, but also reflects our ongoing commitment to innovation and sustainable development," says Pla.

The arrival of the San Miguel facility in the Coega SEZ signifies a significant step forward for the region's expanding agro-processing sector. It joins a consortium of established industry players, solidifying the Coega SEZ as a sector hub.



Local and national govt act decisively to control FMD outbreak

for FMD, followed by a neighbouring dairy farm. Despite collective efforts to contain the virus, it has spread from the Palmietvlei area towards Oyster Bay and the Tsitsikamma region.

Currently, 48 farms are affected, ranging from small to large herds.

"The economic impact is devastating to our local farming community and has the potential to be detrimental to the local economy should the virus continue to spread," said Bornman.

Impact on local farmers

The outbreak has led to:

- An estimated milk production loss of up to 40% due to discarded milk through treatments.
- Lower milk quality due to infected udders.
- Veterinary costs, mainly for treating affected cows.
- Additional labour costs due to longer working hours.
- Additional minerals and feed required for affected animals.

The ATO estimates a total loss for the first 45 days of infection to be between R120 to R150 million, with potential losses reaching R600 million by the end of the year.

Vaccination and culling

"The only method of controlling the viral infection is through vaccination," said Bornman.

ATO, in collaboration with the state veterinary, advises that there are approximately 90,000 producing cows in the affected area. With a moderate culling rate of 15% in a normal year, this amounts to a total of 13,500 cows needing to be culled. At an estimated R9,000 per cow, there is a potential further loss of R122 million if an abattoir for these animals does not

become available soon.

Economic impact

"Dairy farms in our area create around 3,000 direct job opportunities and thousands more down the value chain," Bornman noted.

"I believe that this outbreak has the potential to cause the biggest economic crisis in Kouga since Covid-19, and it is therefore critical that we as a municipality do everything in our power to mitigate this situation and support the local agricultural sector."

Council's swift acceptance of these recommendations underscores their commitment to addressing the crisis and mitigating the impact on the local farming community and economy.

Areas under declaration

At national level, the Department of Agriculture said outbreaks of FMD in the Kouga and Koukamma Municipalities remain of great concern, in an update issued on Friday.

It said cattle on 26 farms have tested positive for the disease. Cattle on these positive farms have been vaccinated to decrease the viral load and to control the severity of the clinical signs seen in dairy cattle in particular. Positive farms were placed under quarantine with strict movement control. The department said requests were received to preventatively vaccinate dairy cattle on farms that have not been confirmed as being FMD positive but were at high risk of infection. Permission was given to preventatively vaccinate cattle on 29 farms. Animals on a further seven farms were vaccinated after veterinary officials reported suspect clinical

signs. In total, 84,655 animals were vaccinated on 62 farms.

In a further effort to prevent any spreading of the disease out of the affected area, the Department of Agriculture declared a Disease Management Area (DMA) on 26 July 2024, which will include parts of the Kouga and Koukamma Municipalities. The boundaries of the DMA will be detailed in the related Government Gazette Notice.

The DMA will make it possible to control movements of animals out of, into and within the affected area. The main aim of the DMA is to prevent the outward spread of the outbreaks, to areas not previously affected. In addition, the DMA aims to decrease any further spread of the disease within the affected area, as this will decrease the viral load and infection pressure within the area.

No cloven-hoofed animals, animal products derived from cloven-hoofed animals or genetic material of cloven-hoofed animals may be moved from, to or within the Disease Management Areas of the Eastern Cape Province except under the authority of a state veterinary permit contemplated in Regulation 20 (1) of the Regulations and in compliance with the conditions of such permit.

In addition to the control measures of the Eastern Cape Province DMA, the July 2024 Gazette Notice also stipulates that cloven-hoofed livestock may only be moved if accompanied by a health declaration from the owner of the animals, attesting to their health at the time of moving. All cattle, sheep, and goats newly brought onto a farm must be kept separated from the resident herds for at least 28 days.

KOUGA Municipality's council unanimously accepted recommendations to consider the current conditions as a local economic state of disaster and to request the relevant provincial and/or national department to declare the same to obtain additional support.

The municipality's executive mayor, Hattingh Bornman, had tabled a motion of exigency addressing the devastating Foot and Mouth Disease (FMD) outbreak in the region.

Urgent measures for a growing crisis

Bornman emphasised the severity of the situation and recommended that council seek guidance to declare the viral outbreak and its economic impact as a local state of disaster.

The outbreak was first reported on 30 April 2024, at The Glen 1 and The Glen 2, just outside of Humansdorp.

The municipality swiftly responded by restricting the movement of all cloven-hoofed animals in the Kouga and Koukamma region, collaborating closely with the Agri Tsitsikamma East Farmers Association (ATO) to implement sanitation points at all entrances to the affected areas.

Worsening conditions

On 16 May, another suspected case was reported on a small beef farm near Palmietvlei, later confirmed positive

Damaged N2 near Kokstad reopens ahead of schedule

ZIMILE Consulting Engineers announced the successful reopening of the main N2 highway between Durban and Cape Town, a month ahead of the anticipated three-month construction schedule.

This achievement, despite several challenges, underscores the power of dedication and teamwork, the company said. The project was led by Zimile's routine road maintenance manager Amit Bhoora, who faced significant obstacles, including localised flooding and disruptive site conditions between Port Shepstone and Kokstad. The collapse of an aging drainage culvert, triggered by extraordinarily heavy rains in mid-January, resulted in the complete closure of the highway. The deluge caused a nearby farm dam to overflow, which washed away the culvert and led to dangerous subsidence of the road surface.

"Zimile was appointed by the South African National Roads Agency (Sanral) to manage this crucial project as part of its 246 km routine road maintenance contract, with a target to reopen the N2 within two months – one month ahead of the usual project timeline," Bhoora said. "Achieving SANRAL's target date required an all-hands-on-deck approach, as we navigated significant technical, environmental, and political challenges."

Initially considering various innovative techniques, Zimile settled on a traditional solution due to time and material constraints, and continuous rain. The chosen approach involved a dump rock foundation and the installation of four 1.5m diameter concrete pipes encased in a concrete shell to manage future overflow events.

"The volume of water from the overflowed farm dam was immense. It

took five days for the water to subside after we excavated a drainage channel across the embankment," Bhoora explained.

According to Zimile, the project's contractor, VEA Road Maintenance, also faced numerous challenges, both practical and political.

Multiple local and district municipalities claimed the project, leading to demands from local business forums for work opportunities. This issue was resolved by splitting the work among different communities. Continuous heavy rain further complicated the project, turning the site into a quagmire and causing vehicles to get stuck.

"Additionally, the nearest quarry supplying dump rock was 45 km away, and other road projects had priority on materials. The quarry worked overtime, and a convoy of 25 dump trucks transported the G7 material."



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Strategic collaboration to develop standards ahead of switch to nuclear

SOUTH Africa's Minister of Energy and Electricity, Kgosientsho Ramokgopa will unveil details of a new 2,500 MW nuclear power plant by August 2024, which means that skills and safety standards around South Africa's nuclear industry are more important than ever, says the Southern African Institute of Welding (SAIW).

In line with this, the SAIW is powering ahead with its collaboration with the International Atomic Energy Agency (IAEA), and the Nuclear Energy Council of South Africa (Necsa). Facilitated by the Department of Energy, this initiative is in the process of establishing a Nuclear School of Excellence, within the Necsa Learning Academy, and introducing advanced training techniques to bolster the continent's nuclear sector.

The School of Excellence is scheduled to commence in the first half of 2025 and will offer a range of specialised courses focusing on welding and non-destructive testing within the nuclear sector, nuclear safety, precision measurement, and consultancy services.

SAIW personnel qualification certification manager Harold Jansen

explains, "Precision in the nuclear field is a non-negotiable and accuracy down to microns is crucial for safety and operational efficiency since minor inaccuracies can lead to significant issues. Our goal is to ensure that professionals are equipped with the necessary skills to maintain the highest safety standards."

Advanced techniques

Necsa Learning Academy manager Clive Mokoena emphasises the strategic importance of the School of Excellence, as it will ensure a continuous supply and development of the needed nuclear skills for the 2.5 GW nuclear power plant and the multipurpose research reactor being planned for South Africa.

One of the key training techniques to be introduced is Time of Flight Diffraction (TOFD), an ultrasonic method that provides exceptional accuracy for inspecting plate and pipe welds. This technique, along with phased array training, will be formally introduced in South Africa, with Level 1 and 2 courses led by industry specialists such as Colin Bird, Ray Turner and Neil Harrap.

"We are committed to making these advanced training techniques accessible and the IAEA-sponsored national project, allows these courses to be presented at no cost to the students (apart from logistical expenses related to travel and accommodation). Since space is limited, only the ten best applicants will be accommodated during 2024 for either the Level 1 UT PA and / or ToFD or the Level 2 UT PA and / or ToFD courses," explains Jansen.

This collaboration between Necsa and SAIW will also target female participants holding UT Level 1 or Level 2 ISO 9712 certification in ultrasonic testing with the opportunity for unsuccessful applicants to consider a second intake scheduled for 2025.

Continental shift

This style of collaborative effort also extends beyond South Africa. As the regional designated centre for the IAEA in Anglophone Africa, the SAIW is spreading nuclear expertise across the continent. Training programs have already been implemented in Kenya, Cameroon, and Sudan, with plans to establish at least one training and examination



centre in all 54 African countries. These centres will be recognised internationally, ensuring that the training meets global standards.

"Our strategy respects the patriotic nature of individual countries while supporting their development," explained the spokesperson. "We aim to enhance nuclear infrastructure across Africa, providing training that is both locally relevant and globally recognised," says Jansen.

The initiative also emphasises the safe use of radioactive sources and radiation, ensuring that infrastructure across various industries is secure. This comprehensive approach addresses safety in the nuclear sector and its application in other fields such as offshore petrochemical and

oil industries.

To ensure the sustainability of the training programs, the initiative includes training for facilitators who will continue to educate future professionals beyond the project's initial two-year span. This 'train-the-trainer' model aims to create a self-sustaining educational infrastructure that can adapt to the evolving needs of the nuclear sector.

Overall, this collaborative effort marks a significant step forward in enhancing the nuclear capabilities of Africa. By prioritising safety, precision, and inclusivity, the initiative aims to create a robust and sustainable nuclear sector that meets international standards and addresses local needs.

Weather conditions reduce season's orange exports

A FURTHER downward adjustment was made to the latest projected export figures for Navel oranges, while the category for Valencia oranges received its biggest projection cut of the season, mostly driven by recently reported extreme weather events in key growing regions. These updates were made following a meeting of the Orange Focus Group of the Citrus Growers' Association of Southern Africa (CGA) held on 23 July to review the export estimates for oranges for the 2024 season.

The projected number of 15kg cartons of Navel oranges expected to be exported is now 21 million, continuing the downward trajectory that was started in May when the season-opening estimate of 25.7 million was reduced to 22 million. This latest review brings the total reduction for the season to a significant 19%. Currently, late Navels are being

packed and shipped as the Navel season draws to a close.

For Valencia oranges, key growing regions in Limpopo and Mpumalanga are well underway with their season, while growers in the Eastern and Western Cape will only start to pack their first Valencia volumes in earnest in the coming weeks. The latest projected volume of 15kg cartons of Valentias expected to be exported by Southern African growers is now 51,6 million, down from May's forecast of 56 million, and April's season-opening estimate of 58 million.

This is a 11% reduction from the first estimate. The largest downward adjustments reflected in the latest review come out of Letsitele, Hoedspruit and the Senwes (Marble Hall and Groblersdal) areas, where the season's production trends have already revealed themselves. Marble Hall and Groblersdal were also hard hit by recent frost damage, further



reducing production forecasts.

"Inclement weather over the past two weeks has meant further reduction in predicted volumes," said Stiaan Engelbrecht, chairman of the Orange Focus Group.

"The freezing cold in the Senwes region has meant that the Navel estimate in that region has been reduced by 600,000 cartons and the Valencia volumes by one million cartons. The Western Cape (Citrusdal) has been impacted by

recent flooding and storms, while the Eastern Cape has been impacted by high winds," Engelbrecht continued. Storms and winds cause fruit to drop from trees, while frost damage also impacts production.

"It is now clear that there will not be an oversupply of oranges this season. We are looking at a balanced market," said Jan-Louis Pretorius, vice chairman of the CGA and a citrus grower in Limpopo.

"These adjusted figures tell the story of a unique season. Firstly, drier and warmer conditions caused fruit sizes to be somewhat smaller. Secondly, a very good local juicing price enticed growers to move more oranges to processing. Thirdly, the bad weather of the past two and a half weeks caused challenges. The last time the industry was looking at similar orange figures was during the 2017 season, especially remembered for the Western Cape

drought," Pretorius explained.

While the financial damage to infrastructure caused by the floods in Citrusdal has not yet been calculated, export oranges have started moving out of the town in the past few days through a private bridge on a citrus farm after the valley was cut off. A provincial disaster was declared after severe rainfall two weeks ago. The Port of Cape Town is back to efficient operation. Gerrit van der Merwe, chairman of the CGA and a grower in Citrusdal, has praised the cooperation and resilience of the local community. "Citrus is now moving and disruption has been minimised. People are working hard and can catch up with the delays in about eight to nine days," he said.

Last year South Africa packed 24.8 million 15kg cartons of Navels and 52.1 million 15kg cartons of Valentias for export to foreign markets, according to the CGA.

Bank spearheads power liberation in SA

IN response to the growing trend of energy procurement amongst some of South Africa's leading industries, including mining, industrial and consumer sectors, Standard Bank has over the last two years significantly expanded its support for decentralised energy to more than 500 MW of new capacity under construction in South Africa.

Since restrictions were lifted on independent power production for businesses, there has been an increased investment trend in decentralised power procurement.

As an indication of scale, it is estimated that 500 MW could supply over 400,000 average homes in South Africa with power.

Standard Bank has also been at the forefront of the transformative movement, the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) since its inception in 2011, committing over R250 billion to alternative and renewable energy sources.

Rentia van Tonder (pictured), Standard Bank head: power, says: "New developments through the adoption of policies towards an open market for power including provisions in the Electricity Regulation Amendment Act (ERA) for power traders and aggregation is driving the decentralised energy models in South Africa. We are seeing businesses invest-



ing in wheeled power solutions through aggregation or bilateral arrangements, combining those with off-grid solutions where relevant towards energy security. Standard Bank's innovative partnerships have enabled clients to install a range of solutions ensuring more flexibility and sustainable power for the future."

Decentralised energy refers to energy solutions that are generated and consumed locally, rather than relying solely on the national grid. It could also include wheeled power, with IPPs selling to corporates directly through a PPA. This approach includes renewable energy sources like solar and wind, which can be implemented in various sectors such as agriculture, mining, manufacturing, and real estate.

In 2022 and 2023 alone, Standard Bank provided finance for 368 MW of decentralised power, demonstrating a commitment to decarbonisation and sustainability. Notable projects included the Sola Group and African Rainbow Energy and Power, where the financing a solar PV plant at African Rainbow Minerals' platinum mining operations, delivers 270 GWh of carbon-

free electricity annually through a 20-year power purchase agreement.

- The Cennergi's Lephalale Solar Project involved project financing for a 68 MW solar project to power Exxaro's Grooteleguk coal mine, reducing emissions by 36% and supporting Exxaro's renewable energy transition.
- More recently Standard Bank closed and started construction on the 155MW wind project through Seriti Green.

"These initiatives have not only bolstered Standard Bank's position in the market but also allowed us to think how to be more proactive and innovative in a competitive market where clients need more flexibility in procuring power whilst also significantly reducing their carbon footprint," says Van Tonder.

The shift towards decentralised energy solutions is alleviating pressure on South Africa's national energy grid, paving the way for a more resilient and environmentally conscious energy landscape.

Standard Bank says it remains dedicated to empowering clients in their journey towards a greener future, reinforcing its role as a catalyst for change in the energy sector which is demonstrated through its dedicated sector focus on banking aggregators and traders towards more flexibility.

Infrastructure reforms needed to combat climate change - CESA

IN an era marked by the escalating impacts of climate change, the importance of developing resilient infrastructure has never been more critical. Consulting Engineers South Africa (CESA) is at the forefront of advocating for robust infrastructural strategies to combat the increasing frequency and severity of extreme weather events. Chris Campbell, CEO of CESA, emphasises the urgent need for proactive measures to ensure the safety and sustainability of communities nationwide.

He highlighted the necessity of revising infrastructure standards in response to more frequent and severe weather events. "For example, there have been revisions of standards regarding how close structures should be built to water courses. These standards are being updated to reflect the increased intensity and frequency of severe storms." He further elaborated that traditional statistical models, which predict storm events every 100 years, are no longer sufficient.

"These flood lines now have to move further back to ensure safety and resilience."

Local authorities play a vital role in this reform. "It's not just developers at fault; local authori-

ties must enforce compliance with updated bylaws and building regulations," Campbell asserted. Failure to do so, he warned, will result in more human catastrophes and property losses.

One of the pressing issues is the construction of informal settlements near water courses, making them highly vulnerable to flooding. "People building informal settlements close to water courses do so out of necessity, but this makes them incredibly vulnerable," Campbell said. He also pointed out that even high-value properties built close to water bodies for scenic views are at great risk, emphasising the importance of adherence to revised building regulations.

The call to action is clear: integrated efforts from government, developers, and the community are essential to create resilient infrastructure capable of withstanding the challenges posed by climate change. "Building resilient infrastructure is not just about new projects but maintaining and adapting our current systems to ensure they can cope with future demands," Campbell concluded.

AGRICULTURE & AGRO-PROCESSING

Sihlobo flags a looming regional maize supply shortage

THE Southern African region continues to face climate-related challenges that place its agricultural sector and food supply at risk, warns author, academic and chief economist at Agbiz, Wandile Sihlobo on his website, Agricultural Economics Today.

He says the mid-summer drought of 2024 has devastated the regional maize supplies, a staple food crop for the region. So far, the focus has been on the losses farmers are experiencing, but soon, consumer pressures will arise.

At the end of February 2024, Zambian President, Hakainde Hichilema, declared a disaster after realising the country had lost over half of its maize harvest because of the drought. Zambia's maize production in the 2023-24 season is down by over 50% to an estimated harvest of 1,6 million tonnes. The country now finds itself in a position where it has to import a record volume of one million tonnes to satisfy the domestic maize needs of 2,8 million tonnes.

Zimbabwe faces a similar challenge, with maize harvest down roughly 60% from the 2022-23 production season to an estimated 635,000 tonnes. This is the lowest harvest since the 2015-16 production season, another drought year. Moreover, the drought is not the only reason for the fall in Zimbabwe's maize harvest; although a significant



factor, the decline in fertilizer usage has also contributed to poor yields. The fertilizer prices, while down from the previous year, are remarkably above the pre-COVID-19 levels, thus adding financial strain on poor small-holder farmers, the majority of producers in Zimbabwe. The fertilizer makes up roughly a third of the grain farmers' input costs.

This significant decline in Zimbabwe's maize production means that the import needs will increase sharply. Zimbabwe's domestic maize consumption is typically at about two million tonnes. Thus, the United States Department of Agriculture's Pretoria-based analysts estimate that Zimbabwe may need to import

at least a million tonnes in the new marketing year of 2024-25 is convincing (the 2024-25 marketing year corresponds with the 2023-24 production season). Such an import figure is a significant increase from Zimbabwe's maize imports of 637,327 tonnes in the 2023-24 marketing year, all from South Africa.

Unlike the 2023-24 marketing year, where South Africa's overall maize exports were 3,4 million tonnes, in the new 2024-25 marketing year, South Africa's maize exports will likely fall to 1,4 million tonnes. This is on the back of a poor domestic harvest. South Africa's maize harvest is down 19% year-on-year, estimated at 13,3 million tonnes, because of the mid-

summer drought.

Admittedly, South Africa did not experience a sharp fall in production, unlike Zimbabwe or Zambia, where the domestic maize harvests are down by over 50%. Part of the reason is differences in farming practices and the improved seed cultivars in South Africa, among other factors. The significant difference is using improved seed cultivars, fertilizer, and agrochemicals. Irrigation is not a major factor, as only 10% of South African maize is under irrigation, and the rest is rainfed. This is similar to Zimbabwe's maize proportion under irrigation.

Still, Zimbabwe will likely be the significant beneficiary if the country's private sector stakeholders and government place orders promptly. Zambia, another Southern African country with a maize import need of a million tonnes, insists that the imports should only be non-genetically modified. Over 85% of South Africa's maize is genetically modified, which means that, under the current rules, Zambia may not consider South Africa a supplier of maize.

One would have expected Zambia to ease its regulations in such seasons of major maize needs. But, the government authorities have maintained this prohibition. It is already a challenge to find white maize in the world market regardless of whether it

is genetically modified or not, as the primary producers are the Southern African region (South Africa specifically) and Mexico. Most of the world's maize is yellow maize for animal feed.

The drought has hit the entire Southern Africa region. Therefore, Zambia faces a tough challenge for the months ahead and is another country to watch closely towards the last quarter of this year and into the first quarter of 2025. It is all possible that, confronted with the realities of higher domestic food prices and scarcity of non-genetically modified maize supplies, Zambia may adjust its policy.

We are reading the headlines about the significant decline in Southern Africa's maize supplies. However, the full impact of the poor harvest on the consumer will likely be more pronounced towards the end of this year and into the first quarter of 2025. This is when the major maize consumers in the Southern African region would have used much of the domestic harvest, which provided a much-needed cushion in the near term. Thus, significant upside risks remain in maize prices, mainly white maize, towards the end of this year and into 2025 because of this possible regional maize demand. There is a Maize Supply Challenge on the Horizon in Southern Africa

Nozzles make a great contribution to sustainability in farming

THERE is a saying: "it's the little foxes that destroy the vineyard". Viewed from a different angle, one can say that it's the small things that often make a big difference. This certainly applies to the nozzles that are used to apply crop protection products. Small enough to fit in a child's hand, a nozzle not only has the potential to exert considerable influence on crop yields – it is also a powerful tool in our quest for sustainable agriculture.

In simple terms, nozzles are tiny components of the vehicle that is used to transport crop protection products from the tank to the target. "This is how we mostly think about nozzles, which explains why they are so often seen as a grudge purchase," says Andries Duvenhage who leads Syngenta South Africa's marketing aimed at grain, deciduous fruit and vegetable growers. "However, when one sees a nozzle as a precision instrument that simultaneously contributes to the farm's profitability and lowers environmental impact, the

picture changes completely."

In the conversation about the impact of agriculture on the environment, nozzles emerge as a powerful means of achieving ecological balance and resource conservation. Precision nozzles are designed to deliver every drop of the spray mix to exactly the right spot. They reduce drift and prevent chemicals from ending up in adjacent ecosystems where water sources and wildlife can be affected. Because the target is hit without fail, growers realise higher yields with fewer resources.

Well-designed, high-quality nozzles further contribute to reduced soil compaction and lower carbon emissions. As less water and fewer chemicals are required, there is less need for heavy machinery passes over fields, which translates to decreased fuel consumption and a smaller carbon footprint. An additional and significant point is that proper and focused application helps prevent the development of resistance by avoiding suboptimal dosing. This



is decisive for the role that chemical crop protection plays in sustainable agriculture.

Nozzles are already in use on just about every farm, hence no new investment in technology is required. All growers have to do, is pay more attention to their nozzles and choose with care when the time comes to replace them, says Duvenhage.

Jack Pickering, application technology specialist at Syngenta South Africa, unpacks what the abovementioned entails. "Calibration is the point of departure, not only of the boom as a unit, but also every individual nozzle." A single nozzle that delivers under or over-specification can have a far-reaching impact on effective application and, by implication, on the money that the grower has spent on the product and the mixing water – and that's without even considering yield losses due to inadequate crop protection. "Worn nozzles significantly increase operat-

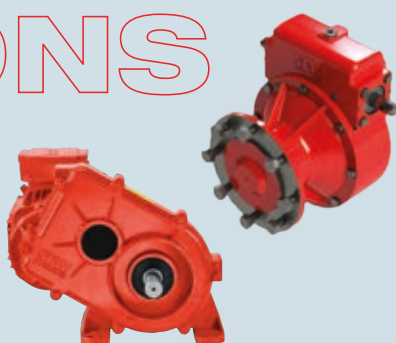
ing costs and these potential losses justify the price of a new set without breaking a sweat," says Pickering. Holistic thinking is, as with so many other things in life, the best approach when deciding which nozzle to invest in. Syngenta's 3D 90, for example, is particularly good at penetrating dense canopies, such as potato leaves and canola. It also shines in the application of pre-emergence herbicides as the aggressive 55-degree angle, coupled with the alternate positioning, gives better deposition on three-dimensional targets. In addition, the nozzle is more effective in windy conditions than an ordinary flat-fan nozzle. The latter cannot be used when wind speeds exceed 10 km/h, whereas the 3D 90 can cope at 15 km/h, which boosts productivity.

"Commercial growers are indispensable to achieving the objective of putting food on the tables of an ever-increasing global population without doing irreversible damage to the planet," concludes Duvenhage.

PURPOSE BUILT

PIVOT IRRIGATION SOLUTIONS

Supporting South Africa's agricultural industry with reliable and efficient drives, pivot and wheel gearboxes.



SEW
EURODRIVE



Modernising for productivity on show

MAKING its debut appearance at Nampo Cape in Bredasdorp in September, geared motor specialist Sew-Eurodrive is all set to excite the farming community with even more solutions to drive productivity and efficiency.

From its firm footprint in the agricultural sector – through packhouses and bottling facilities countrywide – Sew-Eurodrive is taking its offerings into the fields, for instance, with its quality gear units for centre pivots.

Jonathan McKey, national sales and marketing manager at Sew-Eurodrive, says this is part of its continuous innovation to give farmers more energy-efficient solutions for streamlined and automated operations.

“Our classic 7 Series geared motors have for many years proudly served the farming industry – in various packhouse applications including conveyors, sorters and box packaging lines,” says McKey. “These solutions have long been fitted with premium efficiency IE3 motors – which are also available as non-integral units – delivering considerable savings in energy costs.”

Variable speed drive (VSD) technology allows for further efficiency and even the fine-tuning of production lines to suit the pace of



Centre and wheel drives for pivot irrigation systems now form part of Sew-Eurodrive South Africa's extensive solutions portfolio

demand.

“As part of modernising packhouse facilities, VSDs allow solutions to be tailored

to a changing production pattern,” he says. “Another opportunity for greater efficiency is our ECDriveS drive system for roller conveyors in light duty materials handling.”

McKey emphasises the work Sew-Eurodrive has done in ‘closing the loop’ to meet more of the drive requirements in farming. The company now supplies, installs and services the centre drive and wheel drives for pivot irrigation systems – as well as the drive technology to power them.

“These solutions have been popular on farms in Brazil since the 1980s,” he explains. “Similarities with South African conditions show that this offering will add value locally too.”

Aligning to the shaft sizes and flange connections on existing centre pivot irrigation equipment, Sew-Eurodrive provides a ‘plug and play’ solution of gearing, casing and motor. The concept is also more cost effective and sustainable, as the company will service and repair the drive systems – not just replace them.

Underpinning the performance customers demand, Sew-Eurodrive's product quality and support means that the systems achieve the highest levels of uptime. The company's exten-

sive national service footprint and decentralised stocking policy mean that servicing and parts are quickly available to customers within a matter of hours.

“Every key agricultural region is well served by our comprehensively stocked facilities in Cape Town, Nelspruit and Gqeberha for current products as well as for pivot solutions,” he says. “We appreciate that agricultural products are sensitive to time and delay, so we help ensure minimal downtime.”

McKey says Sew-Eurodrive also recognises the importance of sustainability principles in agriculture and builds this approach into its designs. The high performance ECO2 geared motor, for example, is made from uncoated aluminium, which forms a thin protective layer in contact with oxygen. With no coating or solvent on the surface, the result is more cost effective, environmentally friendly and easier to recycle.

The company has even developed its own premium lubricants, based on its decades of field experience. These boost operational performance by reducing friction between gear wheels and extend the life of sealing rings. These innovations are ideal for applications in the food and beverages industry as well.

Using appropriate grades of galvanised products pays off

WHETHER for products such as wire fences and piping, pivot conveyors for irrigation or frames and gutters for greenhouses, the agricultural sector has traditionally bought and specified hot dip galvanising as a preferred corrosion control mechanism. However, the Hot Dip Galvanisers Association of South Africa (HDGASA) needs to tackle a new set of challenges for the agricultural sector, according to executive director Robin Clarke.

“As with all other sectors, standards against which materials are supplied vary greatly. The HDGASA's role is in educating users and specifiers to ensure that the quality of their purchases meets the correct specifications for a particular application and location,” he explains.

Specifications are based on solid science. Environmental data on weather patterns, different soil conditions and general rates of atmospheric corrosion all feed into the HDGASA's advice to the sector: “As an example, for a sugar farmer along the KZN North Coast, we would have broad empirical data on issues such as the level of chlorides from ocean breezes, as well as rainfall and humidity metrics. Coastal regions are highly corrosive environments – and a higher specification of hot dip galvanising would be required for something like a wire fence, pertinent to the relevant con-

ditions and application. By contrast, a farmer in a far drier region such as Beaufort West would need something completely different,” he continues.

Clarke says hot dip galvanising is a preferred corrosion control method for agricultural applications for two reasons: over time, the zinc-based coating reacts with the environment to form a hard-wearing zinc carbonate patina, which is abrasion-resistant and ideally suited to dealing with wind-borne dust and animal traffic. Secondly, if the outer zinc layer is compromised by accidental impact, the zinc layer provides cathodic protection. The zinc around the fractured chip sacrifices itself as an anode, thereby protecting the carbon steel substrate.

Engaging at ground level

Clarke points out that, with more emerging farmers and newcomers to the agricultural sector, the HDGASA sees an opportunity to engage with end-users more directly, to support them in applying the appropriate standards and specifications relevant to their applications.

There are a number of standards when it comes to the corrosion control coating of fencing wire, and also of roof sheeting. As such, when farmers go to their local co-op, they will typically find a variety of fencing rolls in stock.



This makes it hard to tell the various grades apart – and they may be induced to choose the cheapest roll. This begs the question that – although it is still fencing – is it the correct fencing for the KwaZulu-Natal North Coast application, for example?

Similarly, several grades of roof sheeting and cladding – and their coating grades – may be applied in the construction of barns, stock pens and the like. Again, the same challenge pertains to this application. For this reason, it is critically important that galvanised materials are clearly tagged and labelled: “It is imperative that our national standards and codes specify the use of appropriate and relevant product labelling. Those choosing unmarked product,

based solely on price, do so at their own peril,” Clarke warns.

He points out that, during the 1950s and 1960s, product ranges were narrower – and were typically manufactured according to higher-end specifications. As markets opened up, a wider product range – and price-driven economic competition – drove an increase in manufacturing according to the lowest specifications.

Another challenge stems from the agricultural sector's cost pressures and at times, uncertain future. Therefore, purchasers tend to buy on price – rather than adopting the better option of purchasing with the lifecycle costing of the material in mind.

“There must be an incentive for manufacturers to produce high-end materials. Farmers investing in their facilities are therefore encouraged to consider purchases against a 25-year window of operations and return-on-investment. It is here that choosing the right specification is critical,” Clarke reiterates.

Maintaining a complex supply chain

He also notes that while hot dip galvanising ensures low maintenance, end-users do need to protect their investment. An example of such preventative action includes clearing high grass around fences and fence posts.

Brewer's case study shows benefits of polymer bearings

A STUDY by RWTH Aachen University and igus recently quantified the financial and environmental benefits of using lubrication-free polymer bearings over traditional metal bearings.



The study reveals that users can save millions of rands annually in lubricant costs, significantly reducing their environmental impact. High-performance plastic bearings from igus eliminate the need for constant lubrication. Additionally, many working hours can be saved annually on relubrication tasks.

In the case study it was found that switching to polymer bearings across its 160 global sites, Heineken Brasil could save 20 tonnes of lubricant and R100 million in personnel costs annually. This change would also reduce CO2 emissions by 28,814 kg, equivalent to saving over 12,000 litres of petrol.

According to Ian Hewat of igus South Africa the study is pertinent to local industries as the same principles apply. He said the study emphasises the substantial reduction in CO2 emissions when using polymer bearings. Heineken Brasil alone could cut CO2 equivalents by 180 kg annually at 600 bearing points.

“This highlights the increasing pressure on manufacturers to disclose the carbon footprint of their products. The study offers a scientifically validated assessment of the environmental benefits of igus's self-lubricating bearings, making a strong case for their adoption across various industries,” says Hewat.

High-efficiency solar powered pumps

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Xylem's innovative solar water solutions provide adaptability for dependable underground or surface water access.

This system satisfies all your agricultural needs, including watering crops and livestock, along with household water demands on your farm or ranch.

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AUTOMOTIVE

Gqeberha plant launches an off-road SUV

BAIC SA launched its latest model, the all-new B40 Plus 8AT at a media event on 18 July in Gqeberha. Guests toured the BAIC SA plant to gain insight into the company's manufacturing process, commitment to quality, and its promise of excellent customer service.

Company executives shared their plans and future vehicle releases. Guests drove the new BAIC B40 Plus 8AT on an off-road trail to test its capabilities.

The B40 Plus 8AT showed its power and performance on various 4x4 roads where it displayed its handling, suspension and overall performance.

Customer-centric

The company said, "The media event offered

a rare glimpse into BAIC's vision and customer-centric approach, solidifying the company's position as a leader in the automotive industry. BAIC SA's dedication to customer satisfaction and after-sales support was also highlighted, demonstrating its commitment to building long-term relationships with its customers."

Affordable pricing

According to BAIC SA, the BAIC B40 Plus starts at R574,500. "These prices demonstrate BAIC SA's dedication to making quality vehicles accessible to a broader audience. With their competitive pricing and warranty offerings, BAIC SA is poised to make a significant impact in the South African automotive market," the company said.



Partnership advances sustainable electric vehicle technology

SKF, a global leader in bearing technology and manufacturing, is pleased to announce a new strategic partnership with Duracar, an innovative company specialising in light electric vehicles (LEVs).

This collaboration marks a significant step forward in both companies' commitment to sustainability and the advancement of environmentally friendly transportation solutions.

Under the partnership, SKF will supply Duracar with state-of-the-art bearings and other precision-engineered components designed to improve the performance and reliability of Duracar's electric vehicles.

SKF's products are known for their efficiency, durability and reduced environmental impact, which aligns perfectly with Duracar's mission



to produce high-quality, sustainable electric vehicles.

Sustainable innovation at the core

SKF's commitment to sustainability is deeply embedded in its operations and product offerings. By integrating SKF's advanced components into its vehicles, Duracar aims to improve the efficiency and longevity of its electric vehicles, reducing the overall carbon footprint and contributing to a more sustainable future. This partnership reflects SKF's ongoing efforts to innovate in ways that support environmental protection and sustainable practices.

Philipp Herlein, head of global automotive aftermarket at SKF, commented on the partnership: "We are excited to partner with Duracar, a company that shares our vision for a sustainable future."

Our advanced capabilities for rotation, chassis and powertrain will play a key role in improving the performance and sustainability of Duracar's electric vehicles. This collaboration underscores our commitment to developing solutions that not only meet but exceed the environmental expectations of today and tomorrow."

Ludwig Wijma, COO of Duracar, added: "Working with SKF allows us to leverage their expertise in precision engineering and sustainability to ensure that our electric vehicles are not only efficient, but also environmentally friendly and of the highest quality. This partnership is an important milestone for Duracar as we continue to push the boundaries of innovation in the LEV market."

Multi-currency facility fuels motor group's sustainability

STANDARD Bank is proud to announce that it has successfully refinanced and upsized a multi-currency facility for Motus to the value of GBP150 million. Motus is a multi-national provider of automotive mobility solutions and vehicle products and services, with a leading market presence in South Africa as well as a selected international offering in the United Kingdom, Australia, Asia and Southern and East Africa.

The bank acted in its capacity as joint initial mandated lead arranger, bookrunner and sustainability coordinator to play a leading role in the international syndication to refi-

nance and upsize Motus' existing multi-currency syndicated loan facility. The facility incorporates all material aspects of the Loan Market Association's sustainability linked loan principles to allow the facility to be classified as a sustainability-linked facility once sustainability performance targets are finalised by November 2024, further aligning to Motus' ESG commitments.

"This latest transaction is a testament to Standard Bank's capability in



This facility will support Motus' ambition to

international lending syndications to raise hard currency loan funding for our clients to support them in their growth ambitions within and beyond the African continent" said Chanel Boxshall-Smith, loan syndication and distribution, investment banking, Standard Bank.

Internationalisation and diversification are the key strategic growth measures to promote sustainable growth for Motus.

increase EBITDA contribution from international operations in excess of 35%.

"Over the years, we've worked with Motus to achieve important milestones in their business, most notably, its unbundling from Imperial in 2018 and arranging their first ZAR-based sustainability-linked syndicated loan funding in the South African automotive sector in 2022. This transaction deepens Standard Bank's relationship as a trusted partner to Motus," said Venorthy Naidoo (pictured), executive at Standard Bank corporate investment banking.

Youth encouraged to start a career in the automotive sector

STELLANTIS South Africa hosted 44 members of the SOS Children's Villages at the corporate headquarters in Midrand to introduce them to possible careers in the automotive industry. Accompanied by 14 staff members from the homes, many of them former residents themselves, the children were able to see Stellantis' full range of seven brands that are sold and supported in South Africa as well as hear testimonies from three different members of staff who shared their own journeys in the automotive industry – and how they had broken glass ceilings.

"The automotive industry is a global one and provides a range of sustainable careers from automotive engineering to design, sales,

human resources, finance and even public relations," said Stellantis SA head of corporate communications Deidre du Plessis.

"South Africa is a wonderful case in point: the automotive industry contributed 4.9% to the country's GDP in 2022, exported vehicles to 152 different destinations and earned R227,3 billion in foreign exchange."

This was one of the reasons why Stellantis had chosen to invest in the construction of a R3 billion manufacturing facility in the Eastern Cape, to build vehicles for Africa, create jobs and invest in the local community as part of its circular economy philosophy, she said.

"Investing where we operate means making a significant and positive impact in the com-

munities in which we operate and the best way to do this is to provide jobs and create hope. Hosting these wonderful children here today to show them what exists and give them something to aspire to, is a wonderful privilege and we look forward to helping them where we can on their journeys in life."

The SOS Children's Villages are a network of havens for abandoned and vulnerable children across South Africa, building families for children in need, helping them shape their future and develop their communities.

"The automotive sector is wonderful because it allows people to enter at different educational and skills levels across a very wide range of activities as well as playing a critical role

in moving the economy and contributing to it, many people take it for granted, however. Today, we had an opportunity to lift the curtain and give the next generation an idea of how they can play an even bigger role in it and change their lives for the better," said Du Plessis.

Stellantis South Africa is a wholly owned subsidiary of Stellantis NV, the world's third-largest automotive company formed from the merger of FCA and PSA in 2021. Stellantis SA has an integral role in the company's Dare Forward 2030 strategy to produce a million units a year, with 70% localisation and achieve 22% market share in the Middle East and Africa by 2030.

Drive timing belt kits – the sum of all parts

UNIVERSAL Parts Group (UPG) - comprising Autobax, Driveshaft Parts and Imxpart UK – supplies and supports a broad range of Gates automotive components, that have been developed to meet the stringent specifications of Original Equipment Manufacturers (OEM).

"Included in UPG's portfolio of Gates timing belts are timing belt component kits which offer convenience and easy part sourcing to ensure a dependable and safe complete drive replacement solution," explains Chris Charles, Gates product manager, Universal Parts Group (UPG) - automotive, agricultural and heavy-duty aftermarket specialists. "Belt drive components work together, which is why we recommend that when the timing belt is due

for replacement, all other parts of the belt drive that are subject to wear and tear, should also be replaced. If the components of the drive system are replaced at different times, varying rates of wear negatively affect the overall performance of the system and compromise safety."

"Our Gates synchronous drive belt kits make it easy to replace all drive system components together, as a single unit. All OEM-compliant components required for a complete overhaul for virtually every car make and model, are supplied in a single box, with detailed installation instructions."

"There are many other benefits of replacing



the complete drive system with perfectly matched OE quality components in the drive belt kit. These include the avoidance of costly comebacks, as one warranty covers all parts and ordering a complete kit saves time and money."

Gates PowerGrip timing belt kits consist of OE belts, idlers, tensioners and water pumps.

Apart from Gates, UPG distributes quality branded brands, including Europart, Timken, NTN, MRK, NSK, Tirsan, Gomet, Pivotal and Walterscheid, as well as APG and Spicer.

UPG's in-house STC portfolio comprises a broad range of tensioners and idlers, wheel bearing kits, timing chain kits and oil pumps.

Gates components are available from reputable automotive spares dealers throughout Southern Africa, with support from UPG, which has consolidated its four local operations into one highly efficient facility in each major centre - Johannesburg, Cape Town, Gqeberha and Durban. All UPG distribution centres are equipped with advanced inventory management and dispatching systems.

UPG supplies replacement parts for passenger cars, light commercial, heavy-duty, off-highway and agricultural vehicles and also supports heavy-duty vehicles used in industrial sectors.

CHEMICALS & PHARMACEUTICALS

The role of oil quality sensors in successful lubrication management

IN an era when operational efficiency and machine health are critical, oil quality sensors are indispensable tools for successful lubrication management. By harnessing these cutting-edge technologies, businesses can proactively detect potential issues and take prompt action to avoid costly machinery failures and downtime.

"Investing in integrated monitoring solutions empowers businesses to optimise lubrication management, reduce operational costs, and ensure continuous production, gaining a competitive advantage in today's dynamic industrial

landscape," says Craig FitzGerald from ISO-Reliability Partners.

Among the most critical factors affecting machinery efficiency and longevity is the condition of the lubricating oil. Yateks, a leader in oil condition sensors and oil analysis instruments, is dedicated to providing comprehensive solutions for online and portable oil condition monitoring. With advanced technology and expertise, Yateks has earned industry recognition for delivering high-quality, reliable products.

Portable oil analysis equipment is a game-changer for maintaining the health and perfor-

mance of mechanical equipment by providing immediate essential information. By measuring parameters such as viscosity, density, and contamination levels, these devices offer valuable insights into the condition of both the lubricant and the equipment.

"Our solutions enable proactive maintenance, preventing costly downtime and unexpected failures. Yateks offers a range of user-friendly, accurate, and reliable portable oil analysis devices, making them indispensable for maintenance and reliability professionals," says FitzGerald.

For laboratory oil analysis, accuracy and reliability are crucial as they directly impact the quality of results and the effectiveness of maintenance programs. Yateks provides laboratory equipment that meets the highest standards of accuracy and performance, ensuring consistent, repeatable results for trustworthy data and informed decision-making.

Integrating advanced oil quality sensors eliminates the need for costly samples and reduces human error, leading to more accurate data. Yateks cutting-edge technologies empower businesses to take proactive measures with real-time online oil condition monitoring. Immediate identification and rectification of issues such as wear rates, temperature increases, contamination, and viscosity changes are possible, unlike traditional time-based oil analysis programs.

ISO-Reliability Partners, known for innovative ISO fluid cleanliness solutions, has partnered with Yateks to bring cost-effective, high-quality oil analysis solutions to the African market.



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Email: sales@wika.co.za

COMPETENT AND COMPLIANT

There are continuously stringent demands on quality and product safety in pharmaceutical production, and sterile process engineering plays a significant part in this. From measuring instruments, this demands a combination of the most up-to-date hygienic design with high measuring accuracy.

Measuring instruments from WIKA are manufactured in line with the GMP guidelines (good manufacturing practice). They meet the stringent requirements of, e.g.:

FDA (Food and Drug Administration)
EHEDG (European Hygienic Engineering & Design Group)
3-A Sanitary Standards, Inc.
ASME BPE (Bio Processing Equipment)
ATEX (directive 94/9/EC)

For the proof of conformity within the scope of an FDA approval and national authorities, we have an extensive programme ready-certified. For the ongoing testing of the instruments in the context of quality management, a wide range of calibration equipment and calibration services are available.

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Smart in sensing

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Customised pneumatic conveying



PNEUMATIC conveying is an extremely efficient method of transporting a great variety of products, provided that the right system is used and that it's done correctly, says JC Lombard, Atlas Copco Compressor Technique business line manager, oil-free air division.

Pneumatic conveying is favoured by diverse industries such as food & beverage, pharmaceuticals, mining, and even wastewater treatment. Atlas Copco Compressor Technique offers a broad range of pneumatic conveying solutions that include air compressors, air blowers (screw, lobe, centrifugal and turbo) and ancillary products to meet the bespoke needs of these industries.

"Due to the wide range of materials that can be transported via pneumatic conveying, a one-size-fits-all solution is simply not possible," says Lombard. "While some materials can be moved more quickly and in greater volumes, other more fragile materials require careful transportation to avoid damage."

To meet the varying requirements of the materials, there are different pneumatic conveying methods i.e. dilute phase, dense phase and transient phase. Lombard says that it's therefore imperative to know the properties and requirements of the material that will be conveyed to be able to select the most appropriate conveying system that will guarantee optimum performance and product quality and mitigate the risk of potential blockages and combustion.

Atlas Copco also offers pressure and vacuum conveying systems. "Pressure conveying is ideal for effectively 'pushing' bulk materials over long distances and is used in cement production for instance to move cement from the silo through a pipeline for processing," explains Lombard. "In contrast, vacuum conveying, also known as negative conveying, uses air suction to draw materials through a pipeline, reducing contamination risks."

MATERIALS HANDLING, BULK HANDLING & LOGISTICS

Steel distributor orders six overhead cranes

BB Cranes is to manufacture six overhead cranes for steel distributor D&E Group, for installation in new warehouses being built in Cape Town and George.

The additional warehouses will meet increasing demand by engineering firms, construction companies and general industry for D&E Group's product ranges in mild steel, aluminium and stainless steel.

D&E's warehouse cranes will be a mix of 8 and 5-tonners designed as single-girder electric overhead travelling machines. Condra will manufacture them to FEM class 2M standard, the classification for medium to heavy-duty service. The cranes will incorporate larger diameter wheels and miscellaneous other components on the hoists and end-carriages to ensure durability under conditions of intensive usage. Lifting heights will be around 6,5 metres. Girder spans will range between 12 and 20 metres.

Stephen Brink Jnr, senior sales executive at BB Cranes, explained that local manufacture helped win the D&E order. "Because we manufacture in Cape Town, customers get

a short lead time on a new crane. They also gain access to readily available spare parts for maximum crane uptime. We deliver spares within 24 hours," he said.

"If a crane is to be cost effective, downtime has to be minimised," he said. "But users who buy foreign cranes sometimes don't take into consideration how much downtime will cost them if the crane is idle for long periods while spares are imported from abroad. Our spares are made locally, so delivery is almost immediate."

Commenting on manufacturing capacity, Brink claimed that BB Cranes can deliver a new crane between eight and twelve weeks from the date of order. "Our competitors can rarely deliver in less than sixteen weeks," said Brink. "So, because crane users often leave their lifting equipment orders until the last minute, having the shortest lead time gives us significant competitive advantage."

Asked about expansion plans at BB Cranes, Brink said that the company has recently added 400 sqm of factory floor space to its Rivergate premises. "This extra space is allow-

ing smoother production of an order book that continues to grow," said Brink.

"We have employed an additional fabricator, and we have ongoing training programmes in place for factory staff."

BB Cranes was founded in 1992 to marry Cape Town-manufactured crane girders and electrification systems to technically complex hoists, crabs, end-carriages and other crane components supplied by Johannesburg-based Condra, saving customers the cost of transporting a complete crane between Gauteng and the Mother City.

BB Cranes became majority-owned by Condra in 2016, and wholly owned in 2022. The company is currently

working towards ISO 9001:2015 certification to match that held by Condra.



Conveyor belt scale accuracy moves up a notch

CONVEYOR belt scales are indispensable components for measuring bulk materials in mining and industrial operations – but their value is compromised if accuracy is poor.

"The ability to measure moving material in real time allows mines to monitor their mass balance and to ensure that the correct volumes are being fed by conveyor into various plant functions, for instance," says Tinus Ludik, sales manager bulk materials handling at Tru-Trac. "Operating under demanding conditions, belt scales must ideally remain not only functional but accurate – which is why we have developed solutions which stand out in terms of quality, repeatability and accuracy."

Ludik notes that belt scales can also become less accurate over time, so there needs to be regular calibration to ensure that any extreme deviation is quickly rectified. When accuracy errors are high, a

plant is prevented from operating at optimal productivity as plant operators can never be sure whether they are overloading critical equipment like mills.

"To avoid these risks, Tru-Trac's range of belt scales are designed and manufactured to the highest standards, so operators can be confident of the readings they receive," he explains. "This allows plants to operate at their highest efficiencies, with reliable data being provided for decision making."

The company's offering ranges from its TTR SI-2 single idler belt scale system to the TTR DI-4 dual idler belt scale system, and on to the top of the range TTR FI-4 belt scale system with a four-load cell design. Equipped with high-precision load cells and a fully floating weigh frame, the mid-range TTR DI-4 achieves accuracy errors of below 0,25%. It integrates seamlessly with Tru-Trac's remote monitoring system.



"Our flagship TTR FI-4 system boasts a fully floating pivotless weigh frame and four-load cell design, making it ideal for critical control point applications and high-

precision demands," he explains. "With an achievable accuracy margin under 0,1%, it sets industry standards in metallurgical accounting."

"Every application requires its own assessment and solution," says Ludik, "starting with the belt speed." He points out that faster speeds give the belt scale less time to assess the weight on the belt, and it is best to allow at least one second to achieve a reliable reading. The company's rapidly growing installed base of belt scales includes installations at large plants with up to 150 belts in a single operation.

Demand has already extended well beyond the borders of South Africa, with Tru-Trac belt scales at work in Namibia, Zimbabwe, Mali and Tanzania – and sales increasing to Zambia, Botswana, Mozambique and Ghana. International distribution of scales in regions such as Southeast Asia is also demonstrating promising

demand for the Tru-Trac range of belt scales.

The robust and shock-absorbent load cells are locally produced, and Tru-Trac holds extensive stock to ensure quick replacement whenever necessary. The integrator for each unit is well protected within a stainless steel housing for corrosive environments. Enclosures are designed to ingress protection (IP) ratings of 65 or higher to keep out dust and moisture.

"With our focus on quality, we are also excited to be underway with the process of accrediting our belt scales with the South African National Accreditation System (SANAS) through the National Regulator for Compulsory Specifications (NRCS)," he says.

He emphasises that regular maintenance and calibration is vital, and Tru-Trac offers support to do this, as well as guidance on the steps and intervals.

Food quality preserved while conveying

It is becoming increasingly important to maintain food integrity and to do what we can to minimise food shortages. The devastating effects of droughts, floods and fires show food insecurity to be a major concern globally. Every one of us in agriculture and industry has an important role to play in making a difference during this time of crises and uncertainty, says Ken Mouritzen, manager, BLT World.

"One of our most critical responsibilities is to preserve the quality of food products in every stage after harvesting. The use of substandard or incorrect grain handling equipment results in kernel damage and deterioration of the grain and seeds. Large grains, like corn, can be particularly susceptible to physical damage during handling and is more vulnerable to fungi and insect infestation."

"Dust is a major problem associated with conveyor systems in all sectors, particularly where workers have prolonged exposure to the hazards of dust particles. Apart from the negative effects of dust on one's health – like irritation to the eyes, skin and respiratory tracts, as well as serious lung diseases – some types of dust can also form an explosive mixture with air, which is extremely dangerous."

"It is therefore crucial that the correct conveyor skirting is used to offer maximum safety to workers and to ensure minimal deterioration of foods and to maintain the desired level of quality."

Specialists in post-harvest process-

ing are continually looking for more efficient, dependable systems to alleviate problems associated with product damage in bulk handling. It is also important for industry to be able to cope efficiently with the challenges of handling moist and sticky materials.

Common difficulties of bulk conveyors or systems include dust, spills and contamination at the transfer points of conveyor systems. Misalignment, abrasion and subsequent belt damage are other problems in food conveying.

The BLT World team has installed a highly effective system on a conveyor system at a food production plant – comprising the ScrapeTec AirScrape, TailScrape and PrimeTracker belt tracker – and feedback from the customer is positive.

Extreme dust development at the plant caused damage to belt components, due to jamming and spillage. In addition, friction from dust caused wear and tear on side and rear seals, allowing the escape of materials and dust.

According to the plant manager, since the installation of the ScrapeTec system over three years ago, dust



levels around transfer points are significantly reduced, ensuring a safer and healthier working environment. In addition, running costs are lower because there are no longer the costly energy requirements of extraction fans. This highly effective system also minimises the risk of explosions at critical sections along the conveyor route and transfer points – an important safety feature. The plant manager also notes there is reduced need for extensive cleaning operations and maintenance work on the conveyor belt is minimal.

Prior to this installation at the plant, the team had to spend hours each day, cleaning the belt periphery and all transfer points, from unplanned material spills and the remnants of product. The plant manager had previously tried various methods to cope with costly material spills in the plant's moist and sticky environment, without success. This efficient conveyor system enables the team to now spend more time on productive work at the plant.

Studies in other projects show, that even after five years after installation and with continuous use in harsh conditions, BLT World's ScrapeTec systems hardly show any signs of wear.

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QUALITY ASSURANCE

Green excellence certification achieved

WACO Modular has been certified in accordance with the ISO 14001 standard, a recognised measure for Environmental Management Systems (EMS). This certification highlights WACO Modular's dedication to conscious and sustainable business practices.

The ISO 14001 standard offers a framework for organisations to establish and implement environmental management systems that address their environmental footprints and adhere to legal mandates. With more than 360,000 ISO 14001 certificates issued worldwide, it stands as a widely embraced EMS standard internationally.

Championing sustainability

"Our firm commitment to stewardship is our priority and obtaining the ISO 14001 certification solidifies this dedication. We are believers in sur-

passing industry norms to make a difference in the environment," says Gerhard Britz (*pictured*), managing director of WACO Modular. "This certification marks not only a milestone for us but also an integral component of our strategy aimed at bolstering credibility and ensuring compliance with environmental regulations while building trust with our stakeholders."

The journey towards achieving the ISO 14001 certification at the company aligns seamlessly with its pledge, to Environmental, Social and Governance (ESG) principles. In line with the WACO Group's sustainability initiatives, WACO Modular has already been diligently overseeing environmental factors like diesel, water and electricity consumption to strive for ongoing enhancements.

Expanding on a solid foundation

WACO Modular's array of certi-

fications already includes ISO 9001 for quality management and ISO 45001 for health and safety. The addition of the ISO 14001 certification is seen as the next logical move by Karen Olivier, business manager at WACO Modular. She explains, "Integrating ISO 14001 alongside our certifications was a progression that has not only bolstered our environmental management practices but also improved operational efficiencies while creating new market avenues, particularly those with stringent environmental criteria."

Impacts and advantages

Clients and stakeholders associated with WACO Modular are poised to reap benefits from this certification. Britz adds, "Our clients can



now have confidence in partnering with a company that aims to reduce environmental footprints - a crucial consideration in today's landscape where ESG ratings and sustainable supply chain principles hold significant weight."

WACO Modular's commitment to shared values reverberates across the supply chain - from suppliers to clients, along with their respective stakeholders such as investors and financial institutions. Olivier emphasises that their ISO 14001 certification guarantees the upholding and promotion of these shared values.

Path to adherence

Meeting the standards of ISO 14001 required a stringent plan

and process. Training sessions for WACO Modular's SHEQ officer was a priority as well as conducting an in-depth gap analysis and putting environmental controls in place.

Olivier elaborates, "We ensured adherence to aspects such as water usage, electricity consumption, appropriate gas utilisation for air conditioning and recycling procedures. The entire journey was backed by training programmes and external assessments to guarantee compliance with the criteria of ISO 14001."

This accomplishment resonates with the core purpose of the WACO Group 'Enabling a better tomorrow, every day', which goes beyond just focusing on environmental sustainability. Britz says, "It's not about meeting a standard; it's about embracing a comprehensive sustainability approach that benefits our staff, our customers and the communities we serve."

Understanding how compliance training and the QCTO apply in the workplace

BY JACQUES FARMER, MANAGING DIRECTOR AT PRISMA TRAINING

In South Africa, we are in the midst of a momentous transition to the Occupational Qualification Sub-Framework (OQSF) overseen by the Quality Council for Trades and Occupations (QCTO) and this shift is surrounded by much uncertainty. To provide clarity in the transition, it is essential that companies understand two critical aspects: compliance training, and how these fit into the QCTO. By understanding how they work together, businesses and practitioners can start the conversation on how best to foster a culture of safety, standardisation, and sustained growth.

The bedrock of workplace safety and efficiency

Compliance training serves as the foundation for a safe and productive work environment. It equips employees with the knowledge and skills they need to adhere to industry regulations and established safety standards. Unlike a one-size-fits-all approach, specific compliance needs vary across industries. For example, a construction company might prioritise training on working at heights, while a financial services firm might emphasise anti-money

laundering protocols.

Regardless of the sector, compliance training offers a multitude of benefits. Employee safety is paramount and proper training goes a long way in minimising workplace accidents and injuries. This not only protects the wellbeing of employees but also reduces associated costs for businesses. Additionally, regulatory adherence is essential and compliance training ensures businesses operate within the legal framework, safeguarding them from hefty fines and potential shutdowns. A well-trained workforce operates more efficiently, and improved efficiency leads to success. By minimising errors and maximising productivity, compliance training ultimately contributes to a company's bottom line.

Overseeing occupational qualifications

Established in 2010, the QCTO plays a central role in overseeing the design, assessment, and certification of occupational qualifications in South Africa. These qualifications outline the specific skills and knowledge required for various occupations. The QCTO aims to contribute to a skilled workforce by standardising qualifications to ensure consistency across industries and make it easier for employees to demonstrate



their competencies.

The QCTO is mandated to perform a quality assurance role, with rigorous assessment processes that guarantee training providers deliver high-quality programmes that meet industry standards. It is also intended to improve South Africa's human capital development and by focusing on relevant skills, the OQSF will nurture a more qualified and competitive workforce.

Bridging the gap

South Africa's qualification authority, SAQA, is in the process of extending the enrolment deadline for certain pre-2009 qualifications, while reviewing 275 qualifications to see if they need updates before being offered again. There are currently 375 qualifications being registered with the QCTO, with many more to

come. All of this indicates that there is a lot of work to be done, and here, training providers and businesses that consume training programmes need to align with prescribed QCTO qualifications to adequately equip individuals with the necessary knowledge, practical skills, and workplace experience.

To achieve this alignment, both training providers and companies need to focus on practicality. This means that compliance training should go beyond theory, incorporating practical components that simulate real-world scenarios while allowing for better knowledge retention and application. Workplace integration must be carefully considered as ideally, training should incorporate a workplace component where employees can apply their learned skills under supervision. This reinforces learning and ensures its relevance to the job. In this pursuit, collaboration will be key. Effective alignment requires joint effort between businesses, training providers, and the QCTO. Businesses can provide valuable insights into their specific compliance needs, while training providers must ensure programmes meet the QCTO standards.

Challenges

The recent transition to the QCTO

model from the system overseen by SETAs comes with multiple challenges. A key concern is the availability of resources and trained assessors to handle the new qualifications. Additionally, integrating workplace assessments into training programmes can be challenging for unemployed learners. Overcoming these challenges requires a collaborative effort between government, industry stakeholders, and training providers. Increased industry involvement is essential, and businesses must actively participate in designing and refining occupational qualifications.

This collaboration will guarantee the qualifications are practical and directly address industry needs. Second, the government needs to allocate sufficient resources to the QCTO to facilitate a smooth transition to the new framework and ensure its effective implementation. Additionally, collaboration between government and industry can create financial incentives which would encourage more businesses to participate in workplace-based training programmes, further strengthening the overall system and contributing at a larger scale to the development of a skilled, compliant workforce.

Consulting firm recognised for empowerment

PENTA Consulting has, for the third successive year, been recognised for its outstanding commitment to Broad-Based Black Economic Empowerment (B-BBEE) compliance and empowerment initiatives.

This achievement of Level 1 Contributor to B-BBEE status reinforces Penta Consulting's position as a leader in promoting economic transformation and empowerment in South Africa.

The recognition follows an in-depth assessment covering key areas including equity ownership, management control, skills development, supplier development, and socioeconomic development and highlights the company's commitment to inclusivity, diversity, and empowerment.

This emphasises the company's dedication to promoting equity ownership among black individuals and black women, commitment to enter-

prise and supplier development, and making a meaningful impact on the community.

Penta's initiatives over the past year have been backed by a R1.6 million training investment for disadvantaged students, and support for the Yes 4 Youth programme, which has led to many new employment opportunities in businesses spanning ICT, agriculture, and hotels. The company has also supported black-owned suppliers and small businesses through small business loans, monitoring, and mentorship.

Commenting on the recognition, Aminash Patel, MD of Penta Consulting, said: "We are honoured to receive this recognition for our dedication to B-BBEE compliance and economic empowerment."

Our company sees skills training, work experience, and youth employment as critical for transforming South Africa's economy and provid-

ing opportunity to those who need it most. By empowering youth with skills and experience, we can help address unemployment and poverty in a sustainable, long-term way.

"We will continue to drive this positive change to foster a diverse and inclusive workplace and believe that investing in people and communities is key to transformation and economic freedom."

Mokgadi Rameetse from the B-BBEE commented, "I am honoured to continue to see the journey of transformation changing lives and Penta Consulting achieving outstanding commitment to empowerment and to invest in transformation of south Africa. Penta's dedication to driving positive change through their initiatives is truly commendable and I would like to congratulate the leadership and entire team on their well-deserved recognition for B-BBEE level one."



MiDO Technologies focus on projects that enhance access to quality, digital enabling tools and upskill youth for the future workplace to ease South Africa's current digital divide.

WATER & EFFLUENT MANAGEMENT

Advances in measurement instrumentation can boost service delivery

In an African city on a scorching afternoon, an engineer assesses instrumentation at a water reservoir. The water management teams have long grappled with the daunting task of accurately gauging water levels, a critical aspect for ensuring a dependable water supply, particularly during heatwaves or maintenance. The ageing equipment has been prone to errors and frequent breakdowns, making the situation seem impossible. Changing this scenario is a new wave of smart technologies from Vega Instruments, promising a revolutionary impact on the efficiency and dependability of municipal services.

Addressing water management challenges

In Africa, municipalities encounter significant challenges regarding water scarcity and management. Precisely measuring and monitoring water resources is vital to prevent waste and ensure equitable distribution. Traditional methods often fall short due to inaccuracies

and the inability to provide real-time data of high quality. This is why the Vegapuls 6X is widely recognised as the leading radar sensor in the smart technology measurement category. This cutting-edge radar sensor is specially designed for accurate and fail-safe bulk liquid measurement. Its innovative technology offers unparalleled precision, providing accurate readings regardless of environmental conditions.

By offering real-time data, the Vegapuls 6X helps municipalities manage water resources more efficiently, reducing wastage and enhancing service delivery. As a bonus, it minimises maintenance needs, saving municipalities both time and money.

Enhancing energy efficiency

Power generation utilities encounter significant obstacles in their sector, especially in effectively manag-



Precision is the ultimate trend - intelligent technology provides effective solutions

ing and optimising power generation and distribution. Accurately measuring fuel levels in power plants is essential to ensure seamless operations and prevent costly disruptions. Conventional measuring devices often struggle with reliability, resulting in inefficiencies and potential safety risks that can be both expensive and life-threatening.

In the described scenario, the Vegapuls 6X steps provide a comprehensive solution. Its advanced radar technology enables highly accurate and reliable measurements, even in challenging conditions such as extreme temperatures or high dust environments. This reliability ensures that providers can sustain consistent energy production, decreasing downtime and enhancing overall efficiency.

Benefits of smart measurement

The introduction of advanced technologies such as the Vegapuls 6X brings numerous important advantages for African municipalities. Firstly, the primary benefit lies in the enhanced accuracy and reliability of measurements. The radar sensor provides precise data, facilitating improved decision-making and resource management. Secondly, its real-time data capabili-

ties enable prompt responses to any issues, averting potential escalation of problems.

The durability and low maintenance requirements of these sensors translate to municipalities allocating resources more effectively, focusing on service improvement rather than constant equipment repairs. The integration of smart technologies is a critical step towards more sustainable and efficient municipal services.

Being smart

With Vega's technology, the engineer no longer has to worry about the accuracy of data received from level sensors at the reservoir. By incorporating smart technologies such as the Vegapuls 6X, daily operations have been transformed, equipping the utility with the necessary tools to ensure a consistent water supply for residents. This technological advancement in measurement instrumentation not only tackles the challenges faced by municipalities but also sets the stage for a more sustainable future.

Sanitation in SA is a multi-faceted issue - SAICE

SANITATION in South Africa is a complex challenge intertwined with social, economic and environmental factors, as highlighted by the South African Institution of Civil Engineering's (SAICE) Water Engineering Division. Vice-chairperson of SAICE's Water Engineering Division (WED), Zwally Mahlangu, and its former chair and current treasurer, Abri Vermeulen, emphasise that sanitation transcends engineering and requires a holistic approach encompassing critical social issues.

Globally, sanitation remains a significant crisis, with three billion people lacking access to safe facilities. In South Africa, access has improved from 50% in 1994 to 84% today. Yet, the rapid population growth, from 36 million in 1994 to 62 million in 2021, continues to challenge the provision of adequate sanitation.

In explaining the need for a holistic lens to solve many of the sanitation challenges facing the country, Vermeulen asks a simple question,

as an example, "We speak about access to sanitation infrastructure and services, but the question that arises is - do we have the water to flush everything down?"

South Africa faces significant water scarcity, with less water per capita than its much drier neighbours, Namibia and Botswana. Climate change is expected to further reduce water availability. This scarcity is evident in an average annual rainfall of 450 mm, compared to the global average of 750 mm; great variability in rainfall, resulting in frequent droughts and floods; and a skewed distribution of precipitation, with a relatively wet southern and eastern coastal strip becoming progressively drier to the northwest. This does not align well with population centres and major economic hubs. However, in regions with sufficient water supply, managing sludge, sewage, and wastewater is critical. Yet, many sewer systems face blockages, breakages, pump failures, and a lack of affordable emptying services.

A critical issue is the condition of pit toilets in schools, which often pose significant health risks to students and teaching staff. The SAICE WED stresses the urgency of addressing this issue, noting that ensuring safe and clean sanitation in schools is critical for the health and safety of our children and the teachers themselves. Despite some successful projects, many have been compromised by full pits and improper waste disposal, including building rubble and vehicle parts. The tragic deaths of children in poorly constructed pit toilets have brought this issue to national attention, urging immediate action to replace them with safer options.

Additionally, some sanitation programmes have been hampered by the appointment of inexperienced contractors, leading to compromised quality and project abandonment. Mahlangu notes, "Contractors often compromise on quality, leading to poorly constructed toilets that frequently fail."

This issue exacerbates the sanitation crisis, especially in rural and underfunded schools.

Various technologies, from ventilated improved pit (VIP) toilets to decentralised wastewater systems, offer potential solutions to some of the country's sanitation challenges. However, Mahlangu stresses the need to tailor these technologies to each community's unique needs, particularly in informal settlements. "Each community is different," he says. "We need solutions that address their specific challenges and resources."

As an example, Vermeulen and Mahlangu point out that gravity-driven sewerage systems require sufficient installation density to prevent blockages. Dispersed rural homesteads often lack this density, making extensive pumping systems unfeasible. Hence, there is also a need for stand-alone systems that don't rely heavily on water. Historically, the government's reliance on VIP toilets has been effective, but the surge in

population and urbanisation calls for sustainable alternatives.

While significant progress has been made in South Africa's sanitation sector, much work remains. The challenge is not only technical, but also social, requiring ongoing engagement and education.

Raising public awareness and educating communities on proper sanitation practices is essential. "Community involvement and education are essential," Vermeulen says, highlighting the importance of understanding sanitation and system maintenance. Mahlangu agrees, noting, "By empowering communities with knowledge, we can foster long-term change and improve public health."

Vermeulen aptly concludes: "People need to understand that this is an ongoing challenge everywhere in the world. Addressing it effectively demands a concerted effort from all stakeholders in this country."

Ensure productivity and continuity by managing water outages in the workplace

BY ROBERT ERASMUS, MD
AT SANITECH

WATER is a fundamental resource for businesses across all sectors. Its absence due to outages can significantly disrupt operations, impacting productivity, employee wellbeing, and overall business continuity. To mitigate these challenges, proactive planning and the implementation of effective water management strategies are essential.

The impact of water outages

The absence of water within a workplace can have far-reaching consequences. Productivity suffers as essential tasks reliant on water, such as handwashing, equipment cleaning, and food preparation, become hindered. Operational disruptions are inevitable as processes - from manufacturing to hospitality service - experience delays or even

shutdowns. Moreover, employee health and wellbeing is compromised due to the lack of water for sanitation and hygiene. Ultimately, downtime and customer dissatisfaction may arise from service interruptions, in addition to health and safety risks.

Proactive measures build resilience

With water outages likely to increase in frequency and duration across South Africa, it is important for businesses to minimise the disruption by adopting a proactive approach. Comprehensive contingency planning is critical, and organisations will need to put in place arrangements for emergency procedures, roles, responsibilities, communication protocols, and contact information.

Furthermore, it is essential to equip employees with knowledge about water conservation, emergency procedures, and their roles

during outages. In addition to implementing water-saving practices throughout the workplace, such as fixing leaks, installing efficient fixtures, and promoting responsible usage, industries are advised to examine ways to reduce their consumption. Here, water treatment and circular

reuse are critical components of a comprehensive water management strategy and by incorporating these practices, businesses can enhance water efficiency, reduce costs, and contribute to sustainable water management. These practices not only build resilience to water outages but also position the company as a responsible corporate citizen.

Preparing to leverage water and sanitation solutions

In addition to increased outages due to failing or overloaded water



infrastructure, South Africa is facing a growing water crisis, with water shedding (the intentional reduction or interruption of water supply to manage shortages) becoming increasingly common. Investing in water and sanitation solutions will soon be essential for business continuity.

While on-site water storage can provide temporary relief, establishing long-term relationships with water treatment and sanitation providers is equally important. This proactive approach is essential to bypass potential delays caused by new customer onboarding processes during emergencies, guaranteeing a swift response when water outages occur.

Prioritising employee and customer well-being through the provision of portable sanitation facilities, handwashing stations, and sanitisers is vital. Maintaining open communication with employees about

the outage situation and the steps being taken to address it is essential. Considering flexible work arrangements, such as remote work options or adjusted schedules, can minimise disruptions, while providing clear guidelines on hygiene practices and sanitation measures protects employee health.

Protecting the business reputation

A well-managed response to water outages can protect and bolster a company's reputation. The importance of keeping customers informed about service disruptions and any potential impacts on product quality or delivery cannot be overlooked. By implementing effective crisis communication strategies, trust and confidence can be maintained, while highlighting the organisation's ability to adapt and overcome challenges reinforces its commitment to service excellence.

COMPANY & PRODUCT NEWS

SA software company beats international giants to serve clients in 46 countries

WITH roots in engineering consulting, Pragma, a South African-based enterprise asset management company, is achieving global recognition and growth via its targeted software platform that competes with world-leading firms like SAP.

Its new CEO, Scott Gibson (*pictured*), with a proven track record, led Dimension Data's global digital practice and served as CEO of the Britehouse Group.

Recently appointed Gibson explains, "Pragma's roots are in engineering consulting solutions. With over 200 engineers dedicated

to enterprise asset management, Pragma's software competes comfortably with the world's top brands, such as SAP, Maximo and IFS Ultimo. I plan to use my experience growing software businesses to help Pragma achieve its international expansion goals."

Pragma is an industrial tech business headquartered in South Africa with enterprise clients in 46 countries. It helps industrial businesses maximise their return on asset investments and support highly functional and reliable operations.

Its specialised, home-grown solutions include consulting services,

business process managed services, training and a computerised maintenance management platform.

Pragma's software platform, On Key, was designed by engineers for engineers. Used by a multinational food packaging and processing company for more than 14 years, On Key has generated over 2.7 million work orders to keep its assets in 172 countries in pristine condition. Other large operations using Pragma's platform and



services include Tetra Pak, Shell, Astron, Bell, Fair Cape Dairies and Massmart.

As a seasoned angel and later-stage investor in niche tech, Gibson used his investment criteria to guide his decision to join Pragma. "The business owns its intellectual property and appeals to a defined niche, and my experience has shown that clients buy business outcomes, not software. On Key delivers against this mandate, and when combined with the deep subject matter expertise within the business, Pragma has a compel-

ling local and global offering. It's also a particularly agile business with a great client-centric culture," he adds.

Gibson plans to improve the ratio of people-focused versus platform-based revenue. "While our people will always be a key driver of our success, we are looking for innovative ways to grow revenue using our in-house developed platform."

Co-founder and outgoing CEO Adriaan Scheeres, who led the Pragma Group for 34 years, will remain a shareholder and member of the board. He believes that Gibson is the ideal person to lead the business into its next growth phase.

'Voices of Lusikisiki' project lauded for impact

THE Voices of Lusikisiki Asset Based Community Development (ABCD) and Legacy Programme linked to the N2 Wild Coast Toll Road won significant recognition at the 2024 Impact Awards organised by Zutari. These awards are an annual event where the leading consulting engineering and infrastructure advisory firm celebrates its collaboration and co-creation with key clients. "The projects celebrated captures what Zutari is all about," remarked CEO Teddy Daka during the gala event held at the Pretoria Country Club earlier this year.

The project won the Shaping Radically Collaborative Networks category, which recognises a project that

combines technical engineering and strategic advisory service across traditional boundaries. Exemplary collaboration with partners, clients, and end users resulted in improved outcomes. The project also received a commendation in the Delivering Resilient Spaces and Accelerating Equitable Quality of Life categories.

The South African National Roads Agency (Sanral) appointed the Zutari Consortium to oversee the design and construction of the national route and associated local access roads in Package 4 of the N2 Wild Coast Road development. In partnership with AfricaIgnite, the consortium will implement the Sanral Legacy Programme,

which aims to engage with, and develop projects in the communities along the new road, explains Amelia Visagie, associate design director at Zutari.

The scalable project offers the opportunity to expand the ABCD and Legacy Programme aspects to encompass even more villages in the region, thereby extending the community outreach and involvement of the project even further. "We have established a meaningful partnership with the client that has delivered exemplary results. It has been exciting to see people's lives changed as a result," says Visagie.

The project is situated within the Ingquza Hill Local Municipal area of the OR Tambo Municipal District in



(L-R) Tashna Margo, Nwabisa Gxumisa from Sanral, Amelia Visagie, Wim van Schalkwyk and Andile Maphumulo



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the Eastern Cape. It includes villages along Package 4 of the N2, adjacent to Lusikisiki, between the Lingeni Intersection and the Msikaba Bridge.

The N2 Wild Coast Road (N2WCTR) is a multibillion-rand infrastructure project significant for the Eastern Cape economy. As a Strategic Infrastructure Project (SIP), it aims to stimulate development in the Southeast Node and Corridor (SIP3) and aligns with the National Development Plan.

Construction is creating thousands of direct and indirect jobs, though unemployment remains a critical issue driving community action against projects on the Wild Coast. Therefore, Sanral's Legacy Programme maximises the benefits of the new road for adjacent communities, creating

broad buy-in for the N2 construction project, explains Visagie.

The Zutari Consortium, Zutari's Social and Stakeholder Engagement Team, and AfricaIgnite used an Asset-Based Community Development (ABCD) approach. It is a method that empowers communities to identify and develop their skills, knowledge, and talents, focusing on strengths rather than deficits. It promotes active citizenship, community accountability, and sustainable development.

"Investing in proactive community engagement and development resulted in well-informed and committed stakeholders, broad buy-in, and endorsement of both the N2 road construction project and the associated Legacy Programme," says Visagie.

DC power system elevates testing capabilities

COMTEST, the local representative of Ametek Programmable Power, is pleased to introduce the new Sorensen Modular Intelligent-Bidirectional Energy Amplified (Mi-BEAM) Series. The new series is ideal for battery simulation and battery testing (charge/discharge); electric powertrain testing; fuel cell testing and solar inverter testing.

The Mi-BEAM Series is the newest addition to the AMETEK Programmable Power portfolio of high-power testing solutions. It is designed for testing today's complex, high-power electronics in various applications in the automotive, energy storage, industrial, and aerospace markets. This platform covers all test needs through the product life cycle, from advance research and development to design validation and production test requirements.



The new series is completely DC-sourced with sink capabilities and has power levels from 12 kW to 37 kW. It

is fully scalable up to 1.2 MW with parallel systems. The available voltage ranges of 600 V, 1,500 V, and 2,000 VDC in a 4U rack-height chassis provide full power up to 150 A within a single system.

Key features include a complete solution for battery testing, simulation & solar array simulator software included. The new series delivers the highest power density up to 37 kW in 4U rack height (9.25 kW/U). It provides the fastest and cleanest power available with the fastest transient response and low output ripple and noise.

With a 5-year warranty, the Mi-BEAM Series has the longest manufacturer-based guarantee.

Supply chain community urged to 'unlearn' to combat climate change

EXPERTS stress that to fight climate change, it is critical to transform supply chains as they produce around 60% of all carbon emissions globally. But while greener supply chains are a growing imperative, the supply chain community is "unengaged" on the topic, according to international author and renowned circular supply chain specialist Deborah Dull.

United States-based Dull was speaking at the 2024 Sapics Conference in Cape Town, Africa's leading annual event for the supply chain profession. She and supply chain expert Douglas Kent shared the stage to launch their new book. They urged the 750 supply chain professionals in attendance to consider their impact on the environment and foster more sustainable practices in their organisations. "When it comes to making a positive impact on the world, every role in the supply chain has the potential to contribute," Dull said.

The newly released book, "Sustainable Supply Chain Orchestration" provides a compre-

hensive framework for individuals and businesses to adopt more sustainable practices. Dull and Kent introduce readers to their "UNLEARN" model, which encourages companies to rethink traditional supply chain processes and embrace innovative strategies that align with sustainability goals. To UNLEARN, seven key steps are needed, according to Dull and Kent, who outline these in their book.

Unify around the why. It starts with unifying around the why. "Our supply chains have been designed to drive cost efficiencies, optimise delivery times, and ensure product quality. However, this focus has contributed to unsustainable practices that compromise the wellbeing of our planet and society. It's time to unlearn this mindset and redefine the motivation behind our supply chains. We can no longer tolerate excessive packaging, inefficient logistics which increase greenhouse gas emissions, single-use plastics, exploitive labour practices, improper waste disposal or chemical runoff," the authors stress.

Navigate the sustainability uni-



Douglas Kent, left, and Deborah Dull

verse. Navigating the sustainability universe is the next step, because up until now, supply chain leaders have navigated a landscape focused on metrics like cost, speed, and service levels, assert Dull and Kent. "The path to truly sustainable supply chains requires unlearning this narrow focus and embarking on a

journey of exploration and continuous learning."

Liberate yourself from the status quo. Liberating oneself from the status quo is the third step in the duo's UNLEARN model for sustainable supply chains. "Established beliefs and outdated practices can be major barriers to implementing sustainable supply chain strategies. Before embarking on transformative change, organisations must first overcome pervasive myths that undermine the business case for environmental and social responsibility," they assert.

Evolve. The necessity to evolve follows. "By evolving supply chain strategies and operations through a sustainability lens, organisations can mitigate negative externalities while unlocking new value-creation opportunities," Dull and Kent contend.

Amplify the story. Amplifying the story is the next step, and they note that the power of storytelling cannot be overstated. This chapter of their book explores how the strategic use of storytelling can be a transformative force in supply chain orchestra-

tion.

Ramp up the learnings by collaborating. Ramping up learnings and change is the penultimate stage of the journey toward a more sustainable supply chain. "While individual companies can certainly make strides in improving the sustainability of their own operations, the most impactful and scalable solutions often emerge through collaborative efforts with industry peers and competitors," according to the authors.

Nurture the new approach. The final step in their UNLEARN model is to nurture the new approach. "It may be that your supply chain, like many others, has sustainability as a box to be checked - implementing initiatives through one-off training programmes or top-down mandates. Unsurprisingly, this 'set it and forget it' approach just doesn't have staying power. Supply chain leaders must unlearn this transactional way of driving change and instead enshrine sustainability as a living, breathing ethos that permeates every aspect of the organisation's culture and operations," the pair told delegates.

Quality compressed air equipment, new technologies and service solutions on show

INTEGRATED Air Solutions, exclusive regional sales and service partner for top tier compressed air equipment from key manufacturers such as ELGI, FS-Elliott and ABC Compressors, will debut a new cost-effective, economy range of air compressors alongside its acclaimed premium brand machines at this year's Electra Mining Africa hosted at Nasrec in September.

"Hosted from 2 - 6 September, the biennial mining exhibition presents us with the perfect platform to introduce the new ELGi EQ compressor range to the local market," says Wayne Jacobs, managing director of Integrated Air Solutions. "We are extremely excited about the newly released EQ rotary Air screw compressor range which slots in seamlessly between ELGi's belt driven EN units and the more efficient direct drive EG machines, enabling us to essentially meet the full spectrum of industrial air demands. The EQ sells at the price point of some belt driven

units, while offering the efficiency improvement of a direct drive configuration, coupled with the possibility of an integrated Variable Speed Drive (VSD)."

The AB Series oil-free rotary screw air compressor, complete with integrated VSD for optimised energy consumption, will be on display adjacent to high-pressure portable units. With flow rates of up to 1500 CFM and a maximum discharge pressure of 28 bar, these mobile machines cater mainly to the water well drilling market.

"Medium pressure trolley-mounted portable compressors for flow rates between 185 and 850 CFM, for applications including sand-blasting, shotcreting, construction and demolition



tasks, round off our quality air solutions exhibit," says Jacobs.

While cutting-edge designs that promote rugged reliability and easy maintenance form the DNA of Integrated Air Solution's complete compressed

air portfolio, the major ongoing focus is on scaling up energy/fuel efficiency. "Our compressed air solutions add true value for customers in terms of lowest total cost of operation and ownership," says Jacobs.

Integrated Air Solutions forges long-term customer partnerships and machine supply marks only the first step in the compressed air journey. "We dial into our customers' specific needs, offering an aftermarket service that mirrors the superior quality of our

products," says Jacobs. "Aligning with this strategy, we provide industry-leading warranty cover on our ELGi air compressors." He explains that while standard warranty conditions apply i.e. adherence to service intervals, using only genuine parts and qualified technicians as stipulated by the OEM, customers are not expected to sign service level agreements to be able to claim on warranties. "This flags our confidence in the performance and reliability of our machines. Our aftermarket team will be on hand during the exhibition to advise customers on spare parts, services, overhauls and our tailor-made service level agreements."

Integrated Air Solutions' knowl-

edgeable team of specialists will also be on standby during the exhibition, ready to share with customers the benefits of installing inline air treatment equipment, such as dryers and filters, on their processes. "Customers who are not ready or who do not wish to make a capital investment, can discuss their short-, medium- or long-term air requirements with our Rental team."

"We look forward to welcoming Electra Mining Africa visitors to our stand and to showcase our full basket of superior quality air solutions that position us as a single-source, end-to-end compressed air solutions provider," says Jacobs.

Proptech alliance revolutionises leasing

LISA BV, a commercial real estate lead-to-lease technology platform, has announced a formal partnership with MRI Software, a global leader in real estate software and services.

This strategic collaboration integrates Lisa's advanced leasing technology with MRI Property Central, a comprehensive and flexible property management and accounting solution for the South African market.

This integration will provide a streamlined flow of leasing and financial data, offering real estate professionals in the region with enhanced operational capabilities, valuable insights, and an effective, speedy leasing experience for tenants.

"Our relationship with MRI is driven by a shared commitment to serving the needs of our customers and the industry. This expanded integration heralds a new era of opportunity," says Lisa's South African CEO, Rael Levitt.

"By integrating our cutting-edge technology with MRI's property management system, stakeholders can unlock enhanced operational efficiency, gain invaluable insights, and deliver a streamlined leasing experience to

tenants, thereby redefining the leasing landscape."

The partnership enables users of MRI Property Central to access Lisa's comprehensive tools, including automated deal management, robust tenant engagement features, and extensive analytics. This integration transforms the traditional leasing workflow into a dynamic ecosystem supporting smarter business decisions, ensuring property managers can leverage data-driven insights to optimise their assets.

"We are excited to officially welcome Lisa to the MRI Partner Connect programme," said Sean Slack, VP of partnerships at MRI Software. "This integration optimises the lead-to-lease process for MRI clients in the region while unleashing deeper insights to drive informed, strategic decisions about their portfolios."

The partnership between MRI and Lisa builds on a longstanding relationship between MRI and Inospace, the owner of South-African-based Micro Logistics. Lisa BV was initially



launched as the sole provider of automated leasing services to Inospace, which paved the way for an integration between MRI and Lisa.

As a result of this successful relationship, Lisa BV is now rolling out its services to a range of REITs and private property owners. This is a prime example of how collaboration in the proptech space is making the real estate business more accessible and efficient, allowing property owners to focus on their core strength — selling space at optimal, up-to-date prices.

Together, Lisa and MRI Software are shaping the future of leasing. By combining cutting-edge technologies and comprehensive property management and accounting tools, they provide a turnkey solution that enhances decision-making capabilities and redefines efficiency for real estate stakeholders. This is the future of property leasing — smarter, integrated, and more responsive to the needs of both managers and tenants.



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B-BEE 2
B-BEE 2

Cranes' synthetic wire rope reinforces reliability

KONECRANES innovative synthetic wire rope delivers improved performance, total reliability and enhanced safety to S-Series hoists and associated equipment where it matters most, on the factory floor.

"Konecranes was the first to introduce synthetic rope into their standard product and this has resulted in our synthetic wire rope becoming the industry benchmark," says Ian Grobler, sales manager for Konecranes and Demag South Africa.

The Konecranes synthetic wire rope reduces wear on the drum and reeving components due to less surface pressure and friction. The Dyneema fibre used in the synthetic composition, makes it more durable than steel wire and eliminates lubrication resulting in reduced maintenance costs.

"Konecranes was the first industrial overhead cranes company to use the Dyneema fiber as standard for hoisting. Dyneema is one of the world's strongest fibers that has been used for more than 30 years in demanding rig-

ging applications such as lifting slings, mooring, and towing large sea vessels," Grobler said.

The synthetic rope is perfect for reeving and its stable symmetric structure eliminates traditional rope defects. Less surface pressure reduces wear and tear considerably. It is strong, durable, visible and easy to handle.

The synthetic wire rope has undergone rigorous testing such as:

- Splicing - the splicing proves to be the strongest part of the synthetic rope in splicing tests.
- Chemical testing - tested in hydrochloric acid for five hours the synthetic rope showed no damage whilst the steel rope splintered and then broke first on the test bed.
- Grinding and sparks. Sharp edge testing was conducted on the synthetic wire by the company's research and development technicians.

"Comparative tests with steel rope were

also conducted reflecting the superior strength of the synthetic rope in pressure testing with the steel rope breaking first. The synthetic rope consistently exceeds a breaking strength of 5.1," said Grobler.

Synthetic rope is also less vulnerable to traditional rope defects such as birdcaging or kinks thereby reducing replacement costs. It is easier and safer to handle due to its lighter weight – 80% lighter than steel rope – and it does not fray or produce the sharp barbs common on steel wire rope, reducing the chance of hand injuries.



Three ways to conduct thermal inspections

THERE is no universal solution for all infrared inspections with a thermal camera, also known as a thermal imager, says Comtest, the regional distributor of Fluke equipment. "You need to match your method to the type of equipment you're inspecting and the level of detail you require," the company advises. It has identified three typical methods that cover most situations:

1. Baseline thermography
2. Thermal trending thermography
3. Comparative thermography



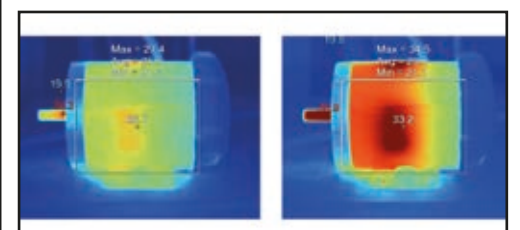
1. Baseline thermography

Baseline thermography is an excellent place to start for just about any application. First, scan the equipment when it's first commissioned or later in the lifecycle when it is working the way it should be, and then use that as a reference point for future inspections. Whether comparing the thermal images on the camera in the field or on a PC using software tools, this baseline approach paves the way to spotting anomalies down the road.



2. Thermal trending thermography

Once the baseline has been set, thermal trending inspections can be used to compare how temperature is distributed in the same components over time. This can help to detect declining performance over time so that downtime maintenance can be scheduled before the equipment 'schedules' it.



3. Comparative thermography

The thermal camera's results from similar components under similar conditions can be compared with each other. This method relies on the idea that similar or identical components under similar loads are expected to have similar temperature profiles. "Once you have three or more components, picking up an anomaly is relatively easy," according to Comtest. "There's one more level of complexity to consider: Depending on the components being compared, the actual temperature difference that can be viewed as an anomaly will vary," it adds.



Online guide suggests correct oil for off-road equipment

FUCHS, a global leader in lubricants, has an Oil Chooser function on its website that allows customers to easily and quickly search for and select the correct engine oil, transmission oil or service product for their yellow equipment. The Oil Chooser functionality can even be accessed on a smartphone on-site by simply opening up a new window.

The Fuchs Oil Changer has been designed to streamline the oil change process for off-highway equipment, ranging from construction machinery to other vehicles. It encourages proactive maintenance, offering myriad benefit to equipment operators and fleet managers.

"The aim is to minimise downtime and maximise efficiency," explains Jarryd Tate, application engineer at Fuchs Lubricants South Africa. Traditional oil changes for off-highway equipment often involve time-consuming and labour-intensive procedures, such as draining the old oil, replacing filters, and refilling with fresh lubricant. These tasks not only demand significant labour but also pose safety risks and logistical challenges, particularly in remote or rugged environments.

Therefore, making sure the correct product is on hand is critical to assist operators in completing these tasks quickly and effectively, even in the field. Selecting the best lubricant is

crucial for optimal performance and longevity.

"However, with a myriad of lubricant options available on the market, selecting the most suitable product can be a daunting task, especially given stringent OEM requirements and the common problem of a lack of in-depth technical knowledge on the part of the end user," says Lesley Barnard, automotive after-market sales manager at Fuchs Lubricants South Africa.

Accessible through the Fuchs website, the Oil Chooser is an intuitive online tool to streamline the lubricant selection process for off-highway equipment. By leveraging comprehensive product data, the innovative platform empowers equipment operators and maintenance professionals to make informed decisions customised to their specific requirements and operating conditions.

A series of simple prompts and dropdown menus guide users through the lubricant selection process, considering factors such as equipment type, operating conditions, and environmental considerations. Based on this input, the platform generates specific recommendations for the equipment in the customer's fleet.

With its user-friendly interface and intuitive design, the Oil Chooser simplifies the complex

task of lubricant selection, eliminating guesswork and uncertainty. Whether choosing a hydraulic fluid for a construction excavator or a gear oil for a front-end loader, users can rely on the platform to provide accurate and relevant recommendations quickly and efficiently.

By matching equipment specifications with the most appropriate lubricant formulations, the Oil Chooser maximises equipment performance and efficiency. Whether enhancing wear protection, minimising friction, or extending service intervals, the selected lubricants are tailored to deliver optimal results in terms of reliability, durability, and overall operational excellence.

Selecting the correct lubricant is not only vital for equipment performance but also to minimise maintenance costs and maximise asset longevity. By guiding users to choose the most suitable products for their specific applications, the Oil Chooser reduces the risk of premature component wear, downtime, and costly repairs, ultimately driving bottom-line savings for companies.

Barnard adds that Fuchs is committed to sustainability and environmental stewardship. The Oil Chooser promotes responsible resource management by recommending lubricants that meet or exceed industry standards.

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High-performance dewatering pump cleans up

ENGINEERED to deliver reliability and efficiency in challenging environments, the next generation Godwin HL270 dewatering pump is now available from Integrated Pump Technology. As a recently appointed Godwin distributor, the company says that this latest model epitomises excellence in the field of fluid handling solutions and addresses the diverse and demanding needs of the African mining industry.

The Godwin HL270 is designed for applications requiring high heads and rapid dewatering, and while being of robust construction, features the latest technology ensuring dependable and efficient water

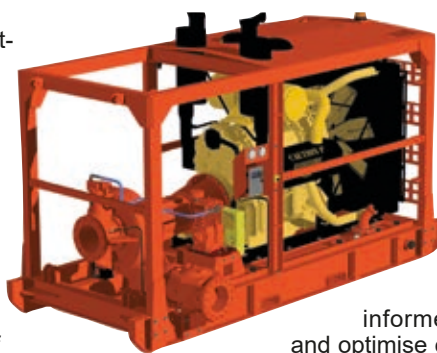
management.

One of the standout features of the Godwin HL270 is its powerful performance. The pump boasts an impressive maximum head of 270 metres and a flow rate of up to 200 cubic metres per hour. This capability ensures that even the most extensive and demanding dewatering tasks are handled with ease. The pump's efficiency translates into reduced operational costs and increased productivity for end-users.

Durability is a hallmark of Godwin diesel-driven pump sets and the HL270 is not an exception. Constructed with high quality materials and designed to withstand the rigours of harsh environments, this

pump offers long lasting performance and minimal downtime. The rugged construction and corrosion-resistant components ensure reliable operation in both clean and dirty water applications, making it a versatile choice for a wide range of dewatering needs.

The Godwin HL270 features advanced technology for enhanced performance and ease of use. The pump is equipped with a state-of-the-art control panel, allowing seam-



less monitoring and operation. The intuitive interface provides real-time data on pump performance, enabling users to make informed decisions and optimise efficiency.

Additionally, the Godwin HL270's automatic priming system simplifies start-up and operation, reducing the need for manual intervention and ensuring consistent performance.

Environmental sustainability is a

key consideration in the design of the Godwin HL270. The pump is engineered for fuel efficiency and low emissions, aligning with both Integrated Pump Technology and Godwin's commitment to sustainable practices. The HL270's efficient operation not only reduces fuel consumption but also minimises its environmental footprint, making it an eco-friendly choice for dewatering projects.

As an official Godwin agent in Africa, Integrated Pump Technology is committed to providing superior support to its customers, ensuring they achieve optimal performance and longevity from their dewatering solutions.

Wine producers solve seasonal demand with rental solution

RAND Air has been a trusted rental partner to some of South Africa's premium wine producers with the supply of portable power solutions for close to 10 years. South Africa has six wine regions, predominantly situated in the Western Cape Province, and ranks eight out of the top ten traditional wine-producing countries, contributing 4% of total global production. The South African wine industry is a major contributor to the country's GDP, bringing R55 billion to the local economy and employing over 269,000 people, both directly and indirectly, according to Stats SA.

Ashley Bailey, who was recently promoted from internal to external sales representative, based at Rand Air's Cape Town depot, explains

that during their busy annual harvesting period between January and April, wine producers need to scale up their energy requirements to keep their production and packaging lines operating.

Bailey explains that Rand Air originally started supplying generators to wine farm customers simply to serve as back-up units. However, the unwellcome on-set of loadshedding with back-to-back high stages, rendered the wine producers' own generators, including their back-up power units, insufficient. Taking into account that the wine producers are prime exporters and that an hour of downtime can result in anything up to R500,000 in pro-



duction losses, downtime is completely out of the question.

"They subsequently turned to Rand Air for a hire solution to meet their power challenges by mitigat-

ing loadshedding, especially during their critical production periods to ensure seamless operations."

Rand Air's power rental solutions for three leading wine farms in the Western Cape comprise TwinPower QAC 1100 units. TwinPower conveniently houses two fully loaded QAC 500 kVA generators side-by-side in one custom 20-foot container. With up to 1 MW of predictable power packaged on a single platform, power has essentially been doubled, providing the ultimate reliable and flexible prime and critical standby power solution to customers. Bailey also points out that this configuration, with its fast-parallel-

system, allows the two generators to work independently or in parallel with each other. "Moreover, owing to the TwinPower concept, one generator can run at 50% while the other is being serviced, offering end-users a built-in backup as standard for seamless 24/7 power supply."

According to Bailey, Covid highlighted the added value of renting air and power as a seamless solution. "The wine producers realised that hiring air compressors and generators eliminated the hassle of servicing and repairs in the event of unexpected breakdowns."

"We are customer-driven, and our qualified Rand Air technicians are a convenient phone call away, ready 24/7 to service and repair machines when necessary".



SKF'S maintenance-free Y bearing unit has significantly extended equipment uptime for key customer, civils company, Gibela, which has over ten years of experience in the field.

The environment in which the level 5CE CIBD-rated company operates can be extremely taxing. Charl Engelbrecht, SKF key accounts manager - agriculture, explains that

Gibela's Vermeer RT650 Trencher was experiencing bearing failures and housing breakages every 150 m of trenching. "With project execution often taking place in remote locations, coupled with tight deadlines, the incessant downtime was not only becoming exceedingly frustrating for our customer but also proving to be very expensive in terms of both time and money."

The SKF team engaged with Gibela owner, Zander Swanepoel, to gain more insight into the challenge. "Having established our customer's specific needs, we recommended our maintenance-free Y bearing unit as the best solution to mitigate downtime and costs," notes Engelbrecht.

The unit consists of an insert bearing that contains a 5-lip mudblock

seal, which is paired with the SKF cast iron housing with solid base feet. The trencher, fitted with the SKF Y bearing solution, completed 1,2 km of uninterrupted trench work enabling Gibela to complete the project ahead of schedule. Moreover, the customer benefited from an immediate saving due to no further external repair costs being incurred.

"While I always knew that SKF

was one of the best brands, it was however an eye opener to experience the quality and technology of this premium product first-hand," says Swanepoel. "The solution has contributed value and savings to my business by enabling us to now sustainably meet our project deadlines." He adds that SKF met his expectations in terms of carrying good stock levels and having the necessary

product knowledge, which it supports with a friendly, professional and prompt service.

"The SKF Y bearing unit delivers a rugged and reliable solution that is more than a match for the punishing conditions ensuing from the extremely challenging trenching application."

Maintenance-free bearing unit wins in trenches

Smart, secure way to power IT

INTELLIGENT power management company, Eaton, has launched the Eaton 5P Gen 2 UPS, a compact and more efficient power solution for edge and informational technology (IT) needs. Said to deliver more output, security and control than any other device in its class, this new product range also enables fleet management, remote UPS setting and remote firmware upgrades.

The 5P Gen 2 has enhanced power capability and provides up to 1,350 W, which is 22% more than its predecessor and 33% more than comparable models available on the market, making it ideal for protecting a wide range of applications. Its intelligent design ensures both stable performance and energy savings, while advanced load segment control prioritises critical equipment and optimises battery runtime.

This UPS model features the Eaton ABM+ Advanced Battery Management technology, which extends battery life by up to 50% and allows for accurate battery life prediction and timely replacement alerts powered by machine learning. It also comes with hot-swappable

batteries and an intuitive battery replacement wizard via a built-in graphical LCD (liquid crystal display).

Eaton's Intelligent Power Manager (IPM2) and Distributed IT Performance Management (DITPM) software enable remote monitoring and management of IT infrastructure, even in hard-to-reach locations, including secure

device configuration and firmware updates. According to Jessica Masina, field product marketing manager at Eaton Africa, "The new Eaton 5P Gen 2 UPS offers superior output, security, and control compared to other devices in its category." The Eaton 5P Gen 2 UPS, together with the cybersecurity Gigabit Network Card (included in the Netpack versions), meets stringent cybersecurity standards.

Moreover, Eaton's Brightlayer Software Suite is available for seamless integration with virtualisation environments, ensuring continuous service and data integrity. "Its intelligent design ensures both stable performance and energy savings," says Masina.



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Limited edition bakkie commemorates 45 years of local production

ISUZU Motors South Africa is celebrating its legacy of producing sought-after Isuzu bakkies in the country over the past 45 years with the launch of the limited edition D-Max 45, competitively priced at R906 100.

Based on the seventh-generation D-Max range, and specifically the 3.0 Ddi double cab LSE 4x4 Automatic derivative, the D-MAX 45 will be released in limited numbers from the end of July 2024. It will be available with an exclusive range of accessories and features, adding further lustre to one of the bakkie segment's most revered nameplates.

"The Isuzu D-Max, and the KB before it, have enjoyed a long and proud legacy in South Africa, and were responsible for creating and popularising the double cab bakkie segment which is now the mainstay of the local industry," says Kevin Fouche, department executive: product planning and programme management at Isuzu Motors South Africa.

"With the inherent practicality, versatility and go-anywhere capability offered by this type of vehicle, it's

no surprise that bakkies now top new vehicle sales in South Africa," Fouche says. "The D-Max has consistently been a leading contender in the segment, whether it's for commercial applications with the trusted D-Max single cab, empowering the agricultural industry with the tough D-Max extended cab, or as a family-oriented leisure vehicle with the all-encompassing D-Max double cab."

Over its seven iterations, the Isuzu bakkie range has remained one of the most compelling and popular models in the light commercial vehicle segment, ever since the first-generation KB came off the Kempston Road production line in Port Elizabeth (now Gqeberha) in 1979.

Following the establishment of Isuzu Motors South Africa in 1988 as a wholly-owned subsidiary of Isuzu Motors Limited – the first outside of Japan – Isuzu trusted and loved bakkie was renamed "D-Max" in line with the brand's global nomenclature.

"The limited edition D-Max 45 celebrates this proud heritage with



unique features, colour options and accessories that will make it a highly sought-after offering in the Isuzu D-Max range," Fouche says.

D-Max 45 features

The D-Max 45 is based on the 3.0 Ddi double cab LSE 4x4 automatic, which means it has an appreciably high level of standard comfort, safety and convenience features, matched to the proven capabilities of the 3.0-litre Ddi intercooled turbodiesel engine which produces 140

kW of power and 450 Nm of torque. This is combined with a dependable six-speed automatic transmission and a part-time four-wheel drive system with a standard differential lock to conquer more challenging terrain.

However, the D-Max 45 stands out from the standard LSE models thanks to the adoption of a gloss black front grille with contrasting lower fog lamp fascia accent garnish, 18-inch gloss black alloy wheels with distinctive silver ring centre caps, and a classy yet practical black Rhinoman X-pedition canopy. The tailgate continues the theme with a black ISUZU decal, as well as a special 45-year commemorative badge that signals this model's exclusive status.

Easy access to the load compartment is facilitated by the inclusion of the tailgate assist feature, while the inclusion of a spray-on bedliner ensures that a variety of goods can safely be carried without scratching the load bed.

A range of attractive colour choices has been selected for the D-MAX 45,

comprising Desert Orange, Splash White, Mercury Silver, Biarritz Blue and Islay Grey.

The upmarket interior, which includes the LSE's partial leather seat trim, benefits from the addition of durable Bundu Basher rubber floor mats, which makes it ideal for dusty and muddy off-road adventures.

A wireless charger is included on the D-Max 45 to keep compatible smartphones charged at all times. This complements the standard nine-inch touchscreen multimedia system with integrated wireless Apple CarPlay and AndroidAuto.

The D-Max LSE's standard suite of safety features is carried through to this limited edition model, including driver and passenger front airbags, side airbags, curtain airbags, a driver's knee airbag and the far-side airbag between the front seats.

Active safety features include ABS with Electronic Brakeforce Distribution (EBD), Brake Assist System (BAS), Electronic Stability Control (ESC) with Traction Control, Hill Start Assist (HSA), Hill Descent Control (HDC) and Trailer Sway Control.

Energy assessments provide insights used to 'fuel' change

WHEN a production or manufacturing facility is built, everything is new and operating optimally. Over time, equipment deteriorates - or modifications are made with the best intentions, but not always with energy efficiency in mind. It is therefore good practice to do regular energy assessments to ensure for example that steam traps are working correctly, and there are no steam piping 'dead legs'.

"Someone may move a machine, and the line which used to provide steam energy is not properly isolated - but is still receiving energy. This is what we term a 'dead leg' and is extremely inefficient," explains Brenainn Cross, technical director at specialist operations and maintenance service provider to the steam and boiler sector, Associated Energy Services (AES).

Detail is in the data

AES engages clients regarding precisely what equipment is on site, and how their steam process operates, which entails requesting data from their systems. Where reliable data cannot however be provided, AES employs data capturing equipment to fill in the gaps.

When it comes to doing an accurate energy assessment, Cross says understanding a company's steam offtake is vital: "We want to know

what their process looks like, how much energy they use, how they use it and when. Some companies have a very flat profile (such as a tissue manufacturer) where there is a very consistent offtake - while others have a batch-driven process (such as a tyre or a food manufacturer) with peaks and troughs throughout their steam offtake cycle.

"Many businesses do not realise that products use steam differently. They see steam use as a linear process, and do not appreciate that product type and mix have a big impact. There is great value for clients when they start understanding their own energy usage-related data - and AES's energy optimisation capabilities, once we have the correct data," he advises.

This information allows AES to estimate whether or not the client's thermal energy plant is fit for purpose.

Finding the energy blind spots

Cross maintains that a lack of data - and analysis - around the conversion rate of fuel into energy is a substantial blind spot for many manufacturing or processing companies. Most focus on fuel consumption versus the quantity of product made - a process known as 'fuel to product out' costing - rather than monitoring how efficiently fuel is con-

verted to steam energy and thereafter how much steam energy is used to produce the product.

He admits, however, there is no single 'silver bullet', and that energy assessments must be carried out on a case-by-case basis: "In instances where we see a mismatch between energy plant or equipment installed on site and the client's energy usage profile, we will raise this. What we can achieve could be constrained by the incorrect or inadequate equipment. We have to assess whether capital investment is required for us to meet our energy optimisation commitments accordingly."

To this point, AES's advice may extend beyond the boiler itself, to issues such as water treatment and asset care: "One of our clients currently needs to consider additional feed water treatment to address a hard water challenge and remove total dissolved solids that can affect overall boiler energy efficiency and - in the worst case - damage equipment," Cross adds.

While data collected regarding pressures, flow rates and temperatures is invaluable, it is often difficult to access and complete a full and detailed risk assessment of all equipment while it is operational. For this reason, boilers need to be taken offline for inspection - so that AES can raise any problems with a client and discuss ongoing asset care and

maintenance, as well as the impact thereof on the energy usage and optimisation process accordingly.

The power of change - and metrics

Cross describes an energy assessment as a "conversation continuing throughout AES's relationship with the client". Ongoing assessments are also vital due to staff and management changes: "We know the baseline situation when we take over the boiler operations and maintenance, however incoming staff and management may not. Therefore - from a perception perspective - it is very important that the client is consistently made aware of the implications were no energy assessments or optimisation to be done - and how pivotal these are to the long-term productivity and sustainability of their facility," he says.

Energy savings speak for themselves. An example is the 21% and 38% improvement respectively registered at two food processing plants where AES is responsible for energy optimisation.

For Cross, initial assessments usually identify "low-hanging fruit" or early energy saving gains. Take insulation: AES has countless examples of advising clients to insulate heated surfaces as a quick way to recover wasted energy.

"Uninsulated steam lines result in energy losses through radiation heat transfer. For a steam line with the specific parameters stated, insulating this piping would amount to a reduction in CO₂e of ~620 tonnes per annum," he says.

Assessments 'fuel' change

"Over the past three years, we have seen increased pressure from larger clients requiring a more direct line of sight when it comes to their energy efficiencies - specifically with a view to environmental or carbon tax concerns," Cross observes.

He adds that AES has been asked to assess many unusual prospective fuel types, including the use of process byproduct streams as potential fuels. "An assessment often proves that the potential energy generation does not warrant the capital expenditure required to make the fuel change," he explains.

The game-changer is the baseline cost of the energy, notes Cross, citing a recent energy assessment where a fuel switch for a client has the potential to unlock significant operational savings.

Regular, accurate energy assessments really focus clients' attention on powerful insights which AES can then use, to make the changes required to achieve energy usage and cost-savings.

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