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VR FLOW BATTERY PLANT PLANNED FOR RB

SOUTH African technology company, Ukhozi Africa Technologies plans to establish a vanadium electrolyte and vanadium redox flow battery manufacturing plant in the Richards Bay Industrial Development Zone (RBIDZ).

The project's R1.24 billion investment value was announced at the recent KwaZulu-Natal Investment Conference.

VRFB technology is gaining popularity in China, Europe, Japan, Australia and across the US as a large-scale battery energy storage (BESS) solution for renewable energy sourced from solar PV panels, wind turbines and other electricity generation sources like gas-to-power and nuclear.

Specifically, Vanadium Redox Flow Battery (VRFB) technology is well-suited to South Africa as the country hosts some of the world's largest high-grade primary deposits of this critical mineral. "We have the rare opportunity to benefit local feedstock from our mines along the full value chain to end-use, and this same feedstock is already proven in the international licensed battery electrolyte manufacturing process that Ukhozi will employ," says Chris Potgieter, Ukhozi Africa Technologies technical director.

Mandla Mhlono, Ukhozi Africa Technologies operations director, explains the company's strategic path to full production, outlining three components to the manufacturing process:

1. Mining and the extraction of vanadium
2. Transformation into a V2O5 electrolyte solution
3. Construction of the battery, including tanks for the electrolyte and a casing.

"Initially, we are not going to get involved in the extraction process," he says. "Our first phase is to build the battery manufacturing and assembly plant because it provides rapid deployment. Thereafter we will construct the electrolyte plant."

The company has concluded a licensing agreement with Liquid Energy (LE) Systems, headquartered in Tokyo, Japan, as a technical partner. Potgieter says that LE Systems is already using feedstock sourced in South Africa in its VRFBs. "The IP sits in the battery's membrane and the electrolyte – they have to be matched. The beauty is that our locally-sourced vanadium is already matched with LE's process. So, we are starting out with proven technology that is already in commercial use." Ukhozi's strategy is to use



The R1.24 billion electrolyte production and battery manufacturing facility has been designed for a 2-hectare site in South Africa's 'energy hub' in the Richards Bay Industrial Development Zone. Image: RBIDZ

proven technologies and battery systems that are already fully commercialised. This allows for less cumbersome financing, and a more accurate financial model that can be tabled to facilitate access to a portfolio of funders and investors.

ADVANTAGES OVER LI-ION

Demand for energy storage solutions is rocketing in tandem with the global shift to renewable energy. Most of South Africa's estimated 12 GW of solar and wind generation capacity currently relies on Lithium-ion (Li-ion) technology for energy storage. Finding its way into our pockets in cellphones, powering laptops, and Electric Vehicles (EVs), Li-ion technology has benefited from familiarity and a head-start in market adoption and large-scale production.

The advantages of this dense, solid-state storage solution are obvious – Li-ion has a good size to energy ratio which makes it portable and convenient. But the batteries are also flammable, degrade to replacement over around 3,000 cycles and are designed to discharge over short-burst (two to four hour) applications.

With the smallest VRFB supplying around 250 kW with a footprint the size of a fridge, they are not going to replace Li-ion in EVs and cellphones. But, in large-scale, fixed applica-

tions, they have many advantages, outperforming lithium batteries, including a benign chemistry that operates safely in temperatures from -20 to +70°C, are suited to longer use durations (4-12 hours) and last for over 10,000 cycles, the equivalent of more than 20 years. At the end of their lifecycle, the vanadium can be reused to produce electrolyte, a far 'greener' outcome than the end of life for a Li-ion battery.

It isn't straightforward to make direct cost comparisons between the two technologies. Potgieter admits the initial Capex cost for VRFBs is higher, but says financial and funding models that take VRFB's longer lifecycle and a range of other cost benefits into account are showing definite promise.

RICHARDS BAY ENERGY HUB

Ukhozi Africa Technologies has secured a 2-hectare site in the RBIDZ for the electrolyte plant and the battery import warehouse and assembly facility from where local content manufacturing will be driven. The electrolyte plant is designed for an annual output of 10,000 m3, the equivalent of 100 MW or 400 MWh of energy.

Positioning itself as an energy hub, Mhlono says Richards Bay is the ideal location for Ukhozi's operations. "We will be setting up an industrial scale VRFB in the RBIDZ in the

VRFB technology provides a unique opportunity for South Africa to create an unencumbered supply chain for a product at the front end of the technology 'S'-curve' - Potgieter

first quarter of next year," he says. "That will be used as energy storage for tenants in the zone and also showcase the technology in a commercial application."

He says the company's strategy is to start production in three years' time, with plans to triple capacity to 30,000 m3 a year in the longer term, adding that Richards Bay is also well-positioned for the export market.

BUILDING THE BOOK

The company is in the process of securing funding and signing up customers. "We have support from a wide range of sources, including the Industrial Development Corporation, Department of Trade, Industry and Competition, and the Black Empowerment Fund, as well as commercial banks. But a project of this size requires a portfolio of investors. We are very particular about finding the right equity partners," says Potgieter.

According to Mhlono, overseas investors have been more receptive than local partners. "We still want the company to remain native South African and so part of our mix is to find investment here."

Mhlono explains that the VRFBs are designed for energy augmentation, not to supply baseload. "For example, at a mine or a manufacturing facility, the VRFBs store energy for use when the sun isn't shining, or the wind isn't blowing. Or they can be charged from the grid and used for demand shifting during peak times. The batteries are ideal for large-scale peak-shaving and backup power applications."

The company is also looking at municipalities and micro-grids as potential customers. "One of these customers could approach us for a battery system to power 1,000 houses as an example. The factory will produce the relevant volume of electrolyte, manufacture the casing and ... continued on page three



Next-gen cranes enhance Durban port capacity

TRANSNET has introduced four new ship-to-shore cranes valued at R967 million at the Durban Container Terminal Pier 2 to enhance the terminal's operational efficiency, cargo-handling capacity, and competitiveness. The new cranes will replace an old fleet which has reached the end of its lifecycle.

Two of the cranes are being commissioned, with endurance testing and operational handover scheduled to start in the last week of October 2025. The remaining two cranes are being assem-

bled and are planned to undergo commissioning and operational handover by the end of November 2025.

The new fleet is part of Transnet Port Terminal's (TPT's) capital expenditure to strengthen the cargo-handling fleet across its container terminals. In March 2025, TPT unveiled 20 straddle carriers and nine rubber-tyred gantries (RTGs) for Durban Container Terminal (DCT) Pier 2 and Pier 1, respectively.

According to Transnet, this investment is already yielding tangible results, which is

affirmed by the recently concluded citrus season, where DCT Pier 2 recorded an impressive year-on-year increase of 28.8%.

TPT has set aside R4 billion on acquiring equipment across its business this financial year (2025/26).

Original equipment manufacturer, Liebherr Africa has equipped the cranes with the latest technology and minimised environmental impact demonstrated by its reduced energy consumption. Positioned at the terminal's edge, the cranes boast advanced cargo-handling features, including increased

lifting capacity, to efficiently load and unload containers on calling vessels.

Speaking during the launch of the ship-to-shore (STS) cranes on 23 October, Transnet group chief executive, Michelle Phillips said: "The arrival and commissioning of these STS cranes represents more than just steel and technology. It is a reinforcement of Transnet's commitment to improving service offering through investment in new equipment. These cranes will enable us to turn vessels faster, to operate at higher winds and match the world-class efficiency that global trade demands."

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Premier welcomes investments valued at R100bn in KZN

ON the second day of the KwaZulu-Natal Trade and Investment Conference 2025, the province's Premier Thamsanqa Ntuli announced that R100.1 billion had been secured in investment pledges.

According to the KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA), Premier Ntuli described the achievement as "a defining chapter in KwaZulu-Natal's investment story - a moment where vision met delivery and ambition exceeded expectation."

According to EDTEA, the pledges represent a major vote of confidence from both domestic and international investors, demonstrating that KwaZulu-Natal's economy is robust, diverse, and ready for expansion. A total of 34 major investment projects were confirmed, projected to create over 60,000 direct jobs and more than 240,000 indirect employment opportunities across the province.

"These are not just figures on paper — they represent partnerships, innovation, and hope," said Premier Ntuli. "KwaZulu-Natal is not only open for business — it is building a future defined by resilience, inclusivity, and global competitiveness."

CONFIDENCE AND COLLABORATION

In a note of appreciation, Ntuli thanked the business community and investors for their trust and partnership, stating that their commitments were "declarations of confidence in KwaZulu-Natal's future".

He emphasised that these pledges reflect a shared belief in sustainable growth, driven by cooperation between government, business, and communities.

"Economic renewal cannot be



achieved in isolation. The growth of KwaZulu-Natal is intrinsically linked to the strength of collaboration between the state, the business community, and our social partners," he said.

The Premier further noted that the government's focus remains on policy certainty, ethical governance, infrastructure readiness and efficient service delivery — key pillars of investor confidence.

BROAD SPREAD

Without sharing details of companies and projects, the EDTEA said the R100.1 billion investment portfolio spans multiple high-impact sectors, including:

- Renewable energy and green technologies
- Advanced manufacturing and industrial development
- Agro-processing and agriculture
- Tourism, retail, and mixed-use developments
- Skills development and property investment.

Major flagship projects include Colenso Power, Mulilo Energy Holdings, Zimbali Lakes, Salt Rock City, and Seaton Estate, among others.

The geographic spread of these investments extends across KwaZulu-Natal's 11 districts, with significant economic activity expected in eThekweni, Msunduzi, King Cetshwayo, uThukela, iLembe, Amajuba, Ugu, and uMkhanyakude. The EDTEA said the deliberate regional diversification aligns with the Premier's KwaZulu-Natal Secondary Cities Network initiative, ensuring that growth reaches both metropolitan and rural communities.

INCLUSIVE AND SUSTAINABLE DEVELOPMENT

Premier Ntuli reaffirmed that the government views every pledge as an investment in people, ideas, and shared prosperity, rather than mere capital flows.

"Behind every investment figure lies a story of opportunity — for fam-



Pictured left; from left : KwaZulu-Natal MEC for EDTEA, Rev Musa Zondi, Premier Thami Ntuli and Trade and Investment KZN Board Chairperson, Musa Myeni at the conference.

Above: Representatives from companies who pledged to invest a total of R100.1 billion in the province at the conference with KwaZulu-Natal government officials

ilies to thrive, for small businesses to expand, and for communities to experience meaningful change," he said.

He also noted that many pledges are greenfield investments, introducing new industries and technologies, while others represent brownfield expansions that strengthen KwaZulu-Natal's existing industrial base.

HOPE THROUGH PARTNERSHIP

Concluding the conference, held from 22-23 October at the Inkosi Albert Luthuli International

Convention Centre in Durban, Ntuli expressed profound gratitude to all participants and reaffirmed his administration's unwavering commitment to transforming KwaZulu-Natal into a globally competitive, inclusive, and future-ready economy.

"Your decision to invest in this province is not simply a financial transaction — it is a vote of confidence in our shared future," he said. "Together, we are laying the groundwork for a stronger, more inclusive, and globally competitive KwaZulu-Natal — a province that works not only for business, but for all its people."

R1.24 bn plan to build large-scale VRFB batteries in RB

continued from page one ...

dispatch it to site," says Mhlongo.

The batteries are easily scalable and supplied in 6 m or 12 m containers. "For mid-sized applications, for example, the unit will probably be a 6m container. In GW applications, the batteries can be modularised with 6m and 12m container sizes. It's very usable and very user-friendly as the electrolyte goes in once every 25 years. Li-ion batteries will be replaced four times by the time the VRFB needs to be restocked," says Potgieter.

Pointing to Australia's burgeoning VRFB supply chain, Potgieter points out that South Africa is starting to catch on, citing the

technology as one of three BESS options being evaluated by the Carissa Wind Energy Facility commissioned to supply Hive Hydrogen's mega green ammonia plant planned for Coega.

Eager to get manufacturing underway and move onto the next phase, Mhlongo adds that the company also sees a large potential cost advantage in reclaiming millions of tons of vanadium-rich slag dumped during the heydays of steelmaking in the country. "Not only will we be solving a long-term waste problem, but also reducing the cost of our vanadium input. That is a longer-term plan, in the meantime, we will source feedstock from local mines," he says.



Siphiwe Nyanda, Ukhozi Africa Technologies financial director adds the company's pledge to the board at the recent KZN Trade and Investment Conference



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World's leading EV manufacturer rolls out SA ecosystem

GLOBAL new energy vehicle giant BYD (Build Your Dreams) is rapidly expanding its footprint in South Africa with a series of major investments aimed at accelerating the country's transition to electric mobility. During a media briefing in Johannesburg, Executive Vice President, Stella Li, weighed in on the importance of BYD's strategic investment in South Africa – calling it a pivotal market and a future springboard for regional growth.

Li outlined BYD's sustainable mobility solutions, dealer network expansion, and technology transfer plans, emphasising the country's role as a key player in BYD's global expansion strategy.

The company announced plans to install between 200 and 300 public charging stations across the country in 2026, making electric mobility



more accessible to drivers nationwide. Li also announced the brand's plans to roll-out ultra-fast 1 MW charging technology infrastructure, paving the way for a new generation of rapid charging, once compatible models reach the market.

These developments reinforce BYD's growing commitment to building a comprehensive ecosystem that

supports the adoption of new energy vehicles (NEVs), encompassing not only electric cars but also battery technology, renewable energy generation and storage solutions.

"BYD's presence in South Africa represents our commitment to being more than an automotive brand - we are a technology company delivering comprehensive new energy solu-

tions for this market," said Nomonde Kweyi, marketing director, BYD South Africa, MEA Region. "From our range of NEVs — including pure electric vehicles and plug-in hybrids — to batteries, renewable energy generation and storage systems, we're building the integrated ecosystem that South Africa needs for its sustainable future. As we expand our dealer network and deepen our local partnerships, we're focused on delivering practical, accessible solutions that meet South Africans where they are today. Our NEV technology, particularly our PHEVs, provides the flexibility this market needs while building toward a fully electric future."

As part of its commitment to creating an enabling environment for EV adoption, BYD South Africa has partnered with ABSA to provide tailored vehicle finance solutions that

make new energy vehicles more accessible to South African consumers. The brand is also engaging with Eskom and other government entities to explore collaboration opportunities that strengthen South Africa's EV infrastructure, including grid readiness and sustainable energy integration for charging networks. These partnerships form part of BYD's holistic strategy to ensure that electric mobility is both practical and achievable for local drivers.

BYD's expansion momentum is further bolstered by the recent opening of its flagship dealership in Sandton. The dealership serves as a hub for BYD's growing portfolio of advanced NEVs and as an education and experience centre for consumers exploring the shift to cleaner mobility.

Forging the future: Entrepreneurs re-engineering South Africa's industrial might

BUSINESS Partners Limited Entrepreneur of the Year Award finalists are demonstrating how locally developed industrial solutions are powering South Africa's economic growth, sustainability, and global competitiveness.

These industrial innovators are modernising South Africa's manufacturing and mining sectors with sustainable, efficient, and locally developed solutions.

South Africa's manufacturing output increased by 1.9% year-on-year in June 2025, showing momentum in industrial growth across key sectors, including chemicals, petroleum, metals, and food and beverages, supported by increased technological adoption and improved supply chains.

Entrepreneurs like Tebogo Kale, Hamilton Stephenson and Raisibe Esther Senoamadi are at the forefront of this transformation, building solutions that make industry safer, smarter, and globally competitive.



Tebogo Kale

TEBOGO KALE, GRAVITAS MINERALS

Tebogo Kale is redefining mineral processing. His company, Gravitas Minerals, developed the waterless Optima Process for coal separation, turning mining waste into a valuable commodity while minimising environmental impact. "I wanted to show that mining can be both productive and sustainable," Kale explains.

Under his leadership, Gravitas has patented multiple processing technologies and expanded its services to

iron ore and manganese, providing clients with scalable, high-efficiency solutions that compete on a global scale.

HAMILTON STEPHENSON, TECHNOGRID (PTY) LTD

When Hamilton Stephenson took over Technogrid in 2016, it was a shell company with just three employees. Today, it designs, tests, and manufactures specialised industrial safety systems, including strain energy absorbers, oleo-hydraulic buffers, and rail clipping systems, which are supplied locally and internationally.

"We aimed to build industrial solutions that South African companies could trust anywhere in the world," Stephenson says. With a skilled team and significant export revenue, Technogrid exemplifies local manufacturing excellence with global reach.

RAISIBE ESTHER SENOAMADI,

BASHUMI INSTRUMENTS & CONTROL SERVICES

Raisibe Esther Lomo Senoamadi has grown Bashumi Instruments & Control Services from a basic supplier into a leading provider of complete laboratory solutions. With expertise in calibration, repairs, refurbishments, and renovations, Bashumi keeps laboratories running efficiently through fast, reliable,

and cost-effective local solutions.

"Our goal has always been to give labs efficient and reliable support without compromising quality," says Senoamadi. Today, Bashumi proudly serves FMCG companies, public and research institutions, and industrial laboratories, providing the tools and services that keep innovation alive and thriving across the country.

Japanese truck brand maintains top spot in SA survey

HINO South Africa claimed the top spot in 'combined customer satisfaction' in Datatrack's survey of truck operators in the third quarter of 2025. It has held this coveted position since March 2020.

"Our combined score for sales, service and parts was 98.68% and Hino also placed first in both the sales (99.74%) and service (99.78%) segments, which was very satisfying as we compete in an incredibly competitive truck market in South Africa," commented Itumeleng Segage, general manager of Hino South Africa.

"These ongoing successes in the extensive Datatrack surveys are a tribute to all those people employed at the 64 Hino dealerships in South Africa as they are in the front line with our customers.

"I also wish to commend the exceptional dedication demonstrated by our head office team and our trusted service providers. This is very much a team effort driven by Hino Japan's international strategy of Total Support, which involves building close bonds with all those in the value chain to ultimately ensure customer satisfaction," added Segage.

The quarterly Datatrack surveys which began in 1986, measure responses from more than 30,000 fleet owners regarding service levels in the three important aspects that influence truck operations, namely sales, service and parts. Scores in these three disciplines are added up to get a combined score.

The Datatrack survey in South Africa currently measures these three customer disciplines with input from operators of six European trucks, four from Japan, one from India and two from China.

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KZN to showcase SA's global appeal at BPESA GBS and BPO Conference

KWAZULU-Natal is entrenching its reputation as one of Africa's leading Global Business Services (GBS) hubs and a model for inclusive growth, digital innovation, and global competitiveness.

Between 25 and 30% of South Africa's global services workforce is concentrated in Durban, making it the country's second largest global

services hub by headcount, with Cape Town occupying prime position.

"As South Africa grapples with a youth unemployment crisis, the GBS sector is playing a pivotal role in shaping a more inclusive economic future. In 2024, the sector created over 20,000 new jobs, with KwaZulu-Natal alone recording just over 6,000 new jobs for the year. On aver-

age, youth jobs accounted for about 89,25% of new hires for the year, demonstrating the attractiveness of this growth sector for its youth job creation potential," says Reshni Singh, CEO at Business Process Enabling South Africa (BPESA), the official trade body for South Africa's GBS sector.

"Through initiatives such as Innovate Durban,

which runs Youth Innovation Challenges and digital skills bootcamps to upskill youth in areas such as IT, coding, and problem-solving strategic talent development, the province is equipping a new generation for the digital economy," says Russell Curtis of Invest Durban.

EXPERIENCE

KwaZulu-Natal (KZN) is home to exceptional B2C and B2B outbound sales talent serving the global business services market.

The province offers tailored, intelligence-driven customer experience and lifecycle management expertise that ensures high-quality service delivery. Many delivery centres maintain ISO-certified security and quality management processes, reinforcing their commitment to excellence.

"In addition, our service agents demonstrate natural empathy and strong relational skills along with a neutral English accent, all of which are ideal attributes for delivering high-quality communication and customer interactions," says Curtis.

KZN hosts multichannel, multilingual global delivery centres operating 24/7/365, servicing markets across the United Kingdom, the United States and Australia. "Critically, labour and operational costs are 65-70% lower than source geographies such as Manchester, Dallas and Sydney, delivering significant cost savings without compromising service quality," he adds.

DIGITAL CAPABILITIES

The province is rapidly expanding its capabilities in artificial intelligence (AI), robotics, machine learning (ML), and real-time analytics. It has proven expertise in behavioural analytics, effectively tracking customer touchpoints and interactions, while its technology-enabled contact centre services include instant messaging and web chat, ensuring seamless and responsive customer engagement across digital platforms.

POWERFUL GBS SECTOR

"South Africa ranks as the world's third most attractive offshoring destination. KwaZulu-Natal's GBS sector demonstrates that we can compete globally while creating meaningful opportunities at home. This makes it an ideal location for the upcoming BPESA GBS and BPO Conference, taking place in Durban from 3-5 November 2025," says Singh.

"KwaZulu-Natal is well positioned to be a premier Global Business Services hub, driving inclusive growth and digital innovation. We are committed to supporting initiatives that promote youth employment, skills development and digital transformation. We believe that the upcoming BPESA GBS and BPO Conference will be a game-changer for the province, showcasing our capabilities and attracting new investments.

We look forward to collaborating with industry leaders and stakeholders to shape the future of the GBS sector in our province," says Sihle Ngcamu: CEO Trade & Investment KwaZulu-Natal.



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Enhancing industrial efficiency with tank mixing eductors

IN the world of industrial processing, uniform mixing is the cornerstone of quality and efficiency, states the Spraying Systems Co. Whether in chemical plants, electroplating lines, or wastewater treatment facilities, inconsistent fluid distribution can lead to defects, energy waste, and costly downtime. A solution is tank mixing eductors from Spraying Systems Co., innovative devices that leverage fluid dynamics to achieve superior agitation without the complexity of mechanical stirrers.

At their core, eductors operate on the Venturi principle. A high-velocity motive liquid—typically recirculated from the tank itself—passes

through a tapered nozzle, creating a low-pressure zone. This vacuum draws in surrounding fluid, entraining up to four times the pumped volume in standard models or three to five times in compact mini versions. The resulting high-velocity discharge plume circulates the mixture thoroughly, promoting homogeneity in temperature, pH and chemical concentration. Unlike air agitation, which risks oxidative degradation, eductors provide gentle, non-aerated mixing, preserving solution integrity.

Spraying Systems Co.'s lineup, including the flagship 46550 series, stands out for its robustness and versatility. Constructed from durable

materials like 316 stainless steel for corrosion resistance or polypropylene for chemical compatibility, these eductors feature large flow openings to minimise clogging from particulates. Their compact, in-tank mounting design eliminates bulky above-tank hardware, reducing interference with sensors or other equipment. Sizes up to 10" for big tank mixing are now available.

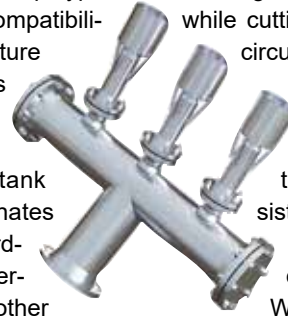
Applications span diverse sectors. In electroplating and metal finishing, eductors ensure even metal deposition, preventing defects from uneven ion distribution. Chemical

processing benefits from optimised blending, boosting product quality while cutting energy use - eductor circulation can be six times more effective than pipe-hole agitation. In petrochemical operations, they maintain fluid consistency in storage tanks, supporting safe handling of volatile mixtures. Wastewater treatment sees reduced sedimentation, and paint booths achieve uniform pre-treatment for flawless finishes.

According to the Spraying Systems Co., the advantages are compelling: no moving parts mean low maintenance and high reliability

in harsh environments. Energy savings arise from recirculating existing pumps, often slashing operational costs by 30-50% compared to traditional mixers. Installation is straightforward — threaded NPT or BSPT connections in sizes from 1/4" to 10"

As industries push for sustainability, Spraying Systems Co.'s eductors deliver eco-friendly performance. By minimising waste and maximising efficiency, they help facilities meet stringent regulations while enhancing throughput. For engineers seeking reliable mixing solutions, these eductors aren't just tools — they're a gateway to streamlined, superior processes, the company says.



Innovative technology heralds a new era in diaphragm valve design

GEMÜ, a global market leader in the valves, measurement and control systems sector for sterile applications, has developed a new valve product as part of a new product generation. The Gemü D41 diaphragm valve features EasyLock technology. This enables maintenance in seconds, reduces complexity and makes handling diaphragm valves significantly easier. The company says it is thereby reshaping the future of valve designs

The pneumatically operated Gemü D41 diaphragm valve is designed for use in aseptic manufacturing sectors. The sealing concept of the valve is based on the newly developed Gemü diaphragm, which also hermetically separates the actuator from the working medium. Gemü D41 with EasyLock technology is installed entirely without loose com-

ponents via a central gearbox.

The new generation valve is easy to handle, safe to use and effective in its process. EasyLock technology offers not only more reliable installation, but also an even compression of the diaphragm. The actuator is fixed to the body via a bayonet fitting and then centrally tensioned via a gearbox entirely without any loose components using an outer hexagon. This makes actuator mounting and disassembly, commissioning and diaphragm replacement significantly simpler and quicker.

Furthermore, the diaphragm with bayonet pin facilitates diaphragm replacement, while the new diaphragm technology offers greater safety and precision in plants.

Due to the new seal system with fixed chambering, the natural setting behaviour of the diaphragm is controlled so that it is no longer necessary to retighten the diaphragm. The optimised rolling behaviour of the diaphragm provides better controllability and ensures low stress on the diaphragm, meaning

that maintenance intervals can be optimised for specific applications. The new body design not only saves weight but also ensures a high flow and homogeneous flow characteristics. This enables the Gemü D41, as well as the Gemü D40 diaphragm valve already announced, to achieve up to 100% higher Kv values.

The Gemü D41 diaphragm valve

with EasyLock technology is a highlight of the new product generation from Gemü.

NEW PRODUCT GENERATION

With the launch of a newly developed, innovative product generation, Gemü is taking a 'Leap' into the future. The acronym 'Leap' is formed from the words: lean, effective, agile and platformised. These concepts embody both progressive products in a modular design and innovative production methods.

The pioneering products of the Gemü Leap product generation not only include the Gemü D41, but also three further valves and two automation components:

- Gemü D40 – the high-performance, pneumatic diaphragm valve
- Gemü S40 – the pneumatic globe

valve with angle seat and straight seat designs

- Gemü P40 – the efficient tank bottom valve with PD technology
- Gemü 12A0 – the intelligent electrical position indicator
- Gemü 44A0 – the multi-functional combi switchbox

The new valves have actuator modules on a uniform platform architecture to enable flexible adaptation to different requirements. The Gemü 12A0 electrical position indicator features modern communication interfaces and an integrated sensor system. With the Gemü 44A0 combi switchbox, depending on the set device functions, the connected process valves can be controlled conventionally open/closed (combi switchbox) or the valve position can be precisely controlled (positioner). Gemü D41 with EasyLock technology.



Metal deactivators – oiling the wheels of corrosion control

IN part nine of the condition monitoring specialist company, WearCheck's lubrication kitchen series on additives, technical manager Steven Lumley explains the role of metal deactivators in the fight against corrosion.

Lubricant blenders add metal deactivators to oils, primarily to protect copper and yellow metals in most automotive and industrial lubricants, including greases and metal-working fluids.

Metal deactivators are another important additive in lubricating-oil formulations, especially with the growing use of non-ferrous metals, notably copper- and aluminium-containing alloys, that can be prone to the negative effects of staining and corrosion.

These metals (or more specifically

their ions) are also catalytically active, and act as reaction sites that can trigger lubricant degradation through oxidation of the base oil.

Metal deactivators belong to the corrosion-inhibitor class of additives, and they work their magic on metal surfaces, especially non-ferrous metals, but also do their thing with wear particles that are dissolved or suspended in the oil.

These specialised additives contain surface-active molecules that adsorb on metal surfaces. The best-understood mechanism for how they function involves the formation of an inactive barrier film that inhibits



Steven Lumley is the technical manager at WearCheck.

cathodic and/or anodic reactions that can accelerate oxidation and cause corrosion.

Metal deactivators are typically organic compounds that contain nitrogen or sulphur atoms. These atoms have a high affinity for metal ions and can form strong, stable bonds with them. This allows the

additives to neutralise or deactivate these metal ions in the oil, which reduces their negative effects.

But there's more! The protective film that metal deactivators form on a metal surface is also thermally stable, water insoluble and chemically bonded.



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Narrow focus on kW can leave HVAC systems under-spec'd

As surface mining and quarrying operations grapple with rising ambient temperatures, the way HVAC systems are specified for mobile equipment is coming under increasing scrutiny. Booyco Engineering, a specialist Original Equipment Manufacturer (OEM) of HVAC systems with over 40 years of experience in these demanding sectors, is sounding the alarm on the risks of relying solely on kilowatt ratings when selecting HVAC solutions.

Brenton Spies, managing director at Booyco Engineering, highlights a growing trend where specifiers and procurement departments are using only an HVAC system's kW rating as a benchmark for selection. While this may seem like a straightforward approach, it is leading to complications on site often only becoming apparent once the equipment is installed and in full operation on the mobile mining machines.

"Not all HVAC systems with the same kilowatt rating are created equal," says Spies. "We are encoun-

tering cases where a unit is rejected for being 'too expensive' compared to other products with the same kW rating - only for the customer to discover later that the chosen system cannot cope with the site's actual ambient conditions."

INTERNATIONAL STANDARDS

The underlying issue, he explains, is that many buyers overlook critical international standards – specifically the ISO 5151 classification – which define the temperature classes to which HVAC systems are engineered. Known in industry as T1 and T3, these classifications set clear parameters for how equipment is expected to perform under different thermal conditions.

"These standards exist to guide the design, testing and validation of systems for specific environments," Spies explains. "The materials, cooling capacities and componentry of a T3-class HVAC system, for example, are engineered to handle far harsher conditions



than those of a T1-class system.

This makes a significant difference in high temperature mining environments, where system failure is not just inconvenient but can compromise safety and productivity."

"Our air-conditioning systems are ISO 5151 T3-rated, meaning they are designed to operate in ambient temperatures of at least 46°C unlike many competitor systems, which are ISO 5151 T1-rated for just 35°C ambient temperatures," says Spies.

"This higher rating ensures our products maintain the specified performance in extremely demanding environments. A system designed for T1 will simply just not perform in T3 conditions, leaving the operator exposed to hazardous conditions."

Spies emphasises that cutting costs at the procurement stage by opting for a cheaper system based on kW rating alone can end up costing operators far more in the long run. Unsuitable HVAC systems not

only underperform in extreme conditions, but they are also more likely to suffer premature wear and require frequent maintenance or replacement.

CONSIDER ENVIRONMENTAL CONDITIONS

He urges those responsible for specifying HVAC systems - particularly for mobile mining and earthmoving equipment - to consider environmental conditions and the applicable temperature classes as a fundamental part of the selection process. With climate conditions becoming more extreme, especially in remote and open-pit mining environments, ensuring that HVAC units are fit-for-purpose is more critical than ever.

Booyco Engineering continues to work closely with OEMs and end-users alike, applying its decades of expertise to ensure every HVAC system it supplies meets the rigorous demands of the application - not just in theory, but in real-world conditions.

Thermal carrier selection is critical to ensure optimal manufacturing and processing

HISTORICALLY, steam, fuelled by coal, has been the most prevalent thermal carrier in South African industry. However, according to Dennis Williams, commercial director of boiler operations and maintenance service provider AES, times are changing, with the manufacturing and processing sector needing to review the energy reticulation systems and thermal carriers currently in use.

When it comes to the correct choice of thermal carrier, Williams says many questions must be asked: "How is steam being used? Should steam supply be outsourced? Is steam the right fit for every process in the manufacturing or processing facility? How much of that facility is aligned with steam – and how much with another thermal carrier? What are the implications of switching those? If changes are made, could the cost of production be reduced and quality improved?"

He advises that the best place to start is by fully understanding the company's primary product and the potential roles of different thermal carriers in the production process.

STEAMING AHEAD

Steam remains the most user-friendly thermal carrier. Inert, non-toxic and safe, it minimises dangers such as product contamination or fire in the event of a leak – which can happen with thermal oil, which is highly flammable and operates at high temperatures. Therefore, from



a process safety management perspective, steam is a good choice.

Furthermore, steam can be generated across a range of pressures and heating can be tightly controlled: "For the purposes of controlling temperature to cook food, one does not want to scald it. When relying on steam at a certain pressure, the thermodynamics preclude that," Williams explains.

When using thermal oil or other heat transfer fluids, temperature control is more challenging because the production process hinges on a temperature differential with no phase change. "If thermal oil is used at 350°C and only 180°C is required for the product, the flow must be controlled to avoid scorching the product. However, a significant flow is also required to transfer the same amount of energy – compared to using steam – because that phase

change is not there and heat transfer relies on sensible heat transfer," he advises.

PRESSURISED HOT WATER

Williams says that lower temperature requirements of 120 to 150°C do not require steam. Instead, by using a pressurised water heater, the water temperature will rise to the desired level without boiling and flashing to steam.

This process is used quite extensively in companies such as breweries. Another example is when cleaning plant or equipment. Pressurised hot water can be used to heat up a caustic solution, which is then reticulated through the plant.

GAS AND HOT AIR

The textile and paper industries

use gas and hot air extensively. "In the paper industry, there is a hood over the main paper cylinder, which is heated using gas. The flame is not fired onto the paper. Instead, it is directed to the air directly in front of the burner flame. A flue gas-air mixture radiates onto the paper surface, to dry out the last bit of moisture," Williams explains.

Alternatively, manufacturing or processing companies can use a combination of thermal carriers. For example, an AES client making coffee and coffee creamer sprays a liquid slurry from the top of a tower. As the droplets cascade downwards, a counter-current flow of heated air removes moisture, so that dry product can accumulate at the bottom of the tower. "The major portion of heat input comes from a cold air-to-steam heat exchanger. The steam heats up the air. A direct fire on gas then fine-tunes the temperature of that air," he says.

THERMAL OIL

Thermal oil is widely used in the textile sector, where it is reticulated through stenters and other textile machinery to provide the temperatures required for heat treatments to fabrics.

"Thermal oil, therefore, has specific applications, where higher temperatures can be achieved than when using a typical industrial process steam application. You do not want to be running a 45-bar boiler to achieve 265°C. You would rather

run thermal oil, which operates at a higher temperature range," Williams points out.

MAKING THE RIGHT CHOICE

Williams says that for many in the manufacturing or processing sector, it is useful to invest time in going back to the drawing board – as making the right choice of thermal carrier is critical. "The way things have always been done may no longer be the right way now – and decision-makers could unlock far more lasting and meaningful savings by carefully analysing key issues such as sustainability and efficiency," he points out, adding that many companies are now integrating different thermal processes into one fully optimised system.

Condensate and low-grade heat can also be recovered for re-use in optimised systems. However, the capital outlay will differ across thermal carriers – with decisions influenced by fuel and technology selection.

In summary, when considering thermal carrier changes or upgrades, Williams warns against price-based procurement. He recommends a longer-term, value-based approach. "When you understand why you are doing something, the value reveals itself. It is not about paying less. It is about deriving maximum value from the production process and achieving optimal operational performance, margin and end-product," he concludes.



Growing forklift brand appoints distributor in SA

SKYJACKS has been appointed as the authorised distributor of Hyundai forklifts in South Africa by HD Hyundai XiteSolution. In an announcement made late in September, Skyjacks said the partnership marks a significant milestone for both companies and reinforces their shared commitment to innovation, reliability, and customer-focused solutions.

We are honoured to represent Hyundai Material Handling in South Africa and excited to add such a respected global brand to our portfolio. Hyundai's range is world-class – spanning electric, diesel and LPG forklifts, and offers reliable, innovative solutions for every application. Combined with SkyJacks' customer network, technical expertise and aftersales support, we believe this

partnership will deliver significant value to businesses across all sectors of the economy," said Alistair Bennett, managing director of SkyJacks.

Juhn Park, managing director of Hyundai Corporation in South Africa, noted that this appointment reflects the company's commitment to strengthening its regional presence. "Hyundai Material Handling is committed to expanding its footprint in Southern Africa, and the appointment of SkyJacks as our distributor is a key part of that strategy. SkyJacks has a proven track record of delivering outstanding customer service and has the expertise to represent our brand with professionalism and integrity. We are delighted to partner with SkyJacks and look forward to build-



ing a strong and successful presence in the forklift market together." As the

official distributor of Hyundai forklifts in South Africa, SkyJacks will supply the complete range of advanced diesel, electric and LPG models, combining cutting-edge technology with proven durability and exceptional value. With the addition of Hyundai forklifts to its portfolio, SkyJacks now offers one of the widest and most comprehensive ranges of access and material handling solutions in South Africa.

Established more than 40 years ago, SkyJacks has built a strong reputation in South Africa as a trusted partner in the supply of industrial and construction equipment. Backed by technical expertise and proven aftersales support, SkyJacks is ideally positioned to represent Hyundai forklifts in South Africa. "This partnership is a natural extension of SkyJacks' long-term strategy to provide customers with premium, dependable solutions that improve productivity and safety," said Bennett.

The Hyundai name is synonymous with value, quality, reliability and innovation – and every Hyundai forklift reflects these qualities. From fuel-efficient, low-emission engines and lithium-ion power options to onboard diagnostics, real-time performance data, comprehensive safety sys-

tems and operator-focused comfort, Hyundai forklifts set the standard for productivity and reliability. Each unit is fully backed by SkyJacks' trusted service and support.

Hyundai forklifts are renowned worldwide for their advanced engineering, durability, and operator-friendly design. With a global presence in more than 140 countries, Hyundai Material Handling is recognised as one of the foremost equipment manufacturers, offering solutions trusted by industries across logistics, manufacturing, food & beverage, construction and warehousing. With lifting capacities ranging from compact warehouse trucks to heavy duty industrial models, Hyundai delivers one of the most comprehensive line-ups in the global market.

Building the skills for a digital logistics economy

By Maureen Phiri,
director at Oxyon People
Solutions

OPINION | THE term 'logistics' typically brings to mind the business of trucks, warehouses and transport routes. However, that narrow definition is simply no longer accurate in the current economy. Logistics has evolved into the backbone of every sector, connecting people, processes and products or even services across industries. As technology reshapes the way goods and information move, the success of South Africa's workforce will increasingly depend on its ability to master new logistics skills: digital literacy, data handling, systems thinking and collaboration across industries.

NEW DEFINITION

Every business relies on logistics. Behind every product launch, infrastructure project or service delivery is a complex network of plan-

ning, movement and coordination. Logistics is what turns production into progress, and it extends far beyond physical transport. Today, logistics is about managing intelligent systems and information flows as much as trucks and cargo. Artificial intelligence, robotics, cloud computing and the Internet of Things (IoT) are transforming supply chains into smart, interconnected ecosystems. This shift demands a new generation of professionals who can interpret data, integrate digital tools and optimise operations across multiple sectors.

SKILLS

To stay relevant, South Africa's workforce must evolve alongside these systems. Traditional operational expertise must be paired with technical fluency, which requires an understanding of how to work with data, automation and analytics. The logistics professional of tomorrow may never step inside a warehouse; instead, they may design digital plat-

forms, monitor sustainability metrics or manage energy distribution networks.

This evolution opens opportunities for upskilling and reskilling across all levels of the economy. Continuous learning programmes that focus on technology integration, leadership, data analysis and communication will help workers and businesses stay relevant in this digital future. Companies also have a vital role to play by making these opportunities accessible, breaking training down into manageable, step-by-step pathways that empower people to participate in the digital transition rather than fear it.

RETHINKING ROLES

As logistics becomes increasingly technical and interconnected, traditional distinctions between manual and office-based work no longer apply. Today's logistics environment demands a blend of operational expertise and digital capability – people who can combine

practical experience with data-driven decision-making and technological insight. This integration of hands-on knowledge and analytical skill is what will define the logistics workforce of the future.

Roles such as cloud logistics architect, sustainability compliance specialist and IoT device technician are emerging as critical to the future of logistics. These positions require different training and mindsets but share a common foundation: the ability to manage complexity and deliver efficiency through technology. Recognising and investing in these skills will elevate logistics from a support function to a strategic growth driver.

ENABLING INNOVATION

Developing South Africa's logistics workforce also means widening the talent pipeline. Encouraging participation from women, youth and diverse communities expands the skill base and stimulates innovation. Diversity is not just about

representation; it is about building teams that think differently and bring fresh solutions to complex logistical challenges.

From operating AI-assisted vehicles to managing data-driven supply networks, the next generation of logistics professionals will need creativity as much as competence. Nurturing that diversity of thought is essential to ensuring South Africa remains competitive and inclusive as the world transitions to smart logistics.

Logistics is no longer a single industry; it is the operating system of modern economies. By investing in digital skills, fostering lifelong learning and championing inclusion, South Africa can turn the logistics transformation into a catalyst for employment, innovation and growth. Every sector, from mining and energy to healthcare and retail, depends on logistics.

Both the challenge and the opportunity lie in preparing people with the skills to manage the logistics of everything.

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SA firm manufactures cranes, hoists and lifting equipment for African mine expansions

CONSULTING firms in Canada and Australia have placed multiple orders on a South African company to manufacture cranes, hoists and other lifting equipment for mine expansion projects in Sierra Leone, Tanzania and Namibia.

Condra, the company executive managing the orders at its Johannesburg factory, has revealed general details but has declined to name either the customers or the mines because of non-disclosure agreements.

The cranes will work in general workshop and feeder-line maintenance applications, with capacities ranging from two to eighteen tons.

Sierra Leone's order comprises one long-reach jib crane, three single-girder overhead cranes and a portal crane, while Tanzanian mines will receive two double-girder cranes, a single-girder machine, one portal crane and a long-reach jib crane.

Six Titan hoists, among them several fitted with articulated carriages to negotiate curved girder tracks, will go to Namibia along with two portal cranes, a long-reach jib crane, two single-girder cranes and a double-girder machine. Fifteen chain hoists and blocks will also be shipped to that country.

Condra's Titan hoist range is

versatile, comprising the Compact Series with capacities to 32 tons, and the SH (Short-Headroom) Series with capacities to 18 tons. All models are variants of the veteran K-Series hoists, but refined to offer a more compact profile with markedly reduced overall dimensions.

Among the cranes included in the international orders are several equipped with high-lift K-Series hoists, in one instance to a height of 40 metres. The company says these hoists have a proven record in high-lift applications, with Condra widely recognised as Africa's market leader in this specialised arena. The company's installed base includes hoists with controlled lifts as high as 150 metres.

A company spokesman said there had been close cooperation with the consultants to ensure that agreed prices could remain competitive without compromising the robust reliability required for harsh operating conditions.

Overall lifetime cost will remain lower than cranes offered by rival firms, said the spokesman, while inspection and testing will take place at defined stages during manufacture to ensure compliance with international quality control, safety, and lifting equipment standards.

Condra's customers placed their orders in late August.



Telehandlers flex their muscle with strong-arm performance

WACKER Neuson's range of ground-engaging compact telehandlers packs class-leading performance and high payload capacity into a compact frame, offering far more than meets the eye, according to the company. Excelling in lifting, loading, stacking, moving and digging functions, these big-on-power, small-in-footprint machines exceed expectations.

With five versatile models available to the southern African market, Wacker Neuson has specially tailored its telehandlers to meet the demands of even the most challenging high-pressure job site environments.

First in Wacker Neuson's performance-driven telehandler line-up is the 1445, a compact powerhouse that delivers big results. With a stacking payload of 1.4 t and a lift height of 4.3 m, it handles heavy loads while maintaining ample reserve capacity. Dynamic all-wheel drive, high payload, low weight and unbeatable manoeuvrability make the 1445 a true standout.

When the job calls for stacking heights of 6 m and a 2.7 t payload, the TH627 telehandler is a trusted go-to solution - a versatile powerhouse and indispensable tool on any construction site.

The 3507 impresses with strong performance in a compact format.

"While this machine features a compact design and low overall height, don't be fooled by its size," says Glenn Theron, Wacker Neuson sales manager - sub-Saharan Africa. "An impressive stacking height of 7.0 m and a 3.5 t payload, coupled with a small turning radius, make this robust telehandler deceptively powerful. A combination of stepless travel up to 40 km/h, integrated load-sensing hydraulics and smart driver assistance powers this machine's maximum efficiency. The 3507 is proof that dynamite truly comes in small packages!"

Next up is the 3610 telehandler. Considered a true all-rounder within Wacker Neuson's telehandler portfolio, this dynamic machine is prized for its versatility. The telescopic handler boasts an operating weight of 8.2 t, a maximum stacking height of 9.5 m and a payload capacity of 3.6 t. These capabilities, paired with its three-part compact-enhancing boom design, make demanding material handling environments such as recycling applications the true forte of the 3610.

With a towering 9 m stacking height and built to carry 5.5 t, the telehandler 5509 stands as the heavyweight champion in the Wacker Neuson fleet in both size and strength. A high-performance power unit that delivers exceptional torque as well as an eco-



speed-PRO transmission are standard fitments in this flagship machine.

Wacker Neuson's telehandlers have been meticulously engineered with efficiency, safety and operator comfort as core priorities, ensuring reliable performance, reduced operator fatigue and maximum productivity on every job site. Weighing in on efficiency, Theron highlights the combined brake-inching pedal fitted on all machines.

"This component ensures simple and safe operation, wear-free control of the working speed at high engine speeds and maximum working hydraulics even at low travel speeds."

Heavy-duty trucks achieve top safety rating in second Euro test

VOLVO Trucks has received the maximum 5-star safety rating for heavy-duty trucks from the European consumer test organisation Euro NCAP. Both the Volvo FH Aero and the Volvo FM scored top results in the 2025 rating.

Euro NCAP's first ever safety test for heavy-duty commercial trucks took place late in 2024, focusing on the 'fleet segment. Two Volvo models - the Volvo FH Aero and the Volvo FM - were the only trucks to score the maximum 5 stars in the first test, according to the company.

The safety rating organisation has now issued the results of its second rating, this time covering 6x2 rigid trucks. Two Volvo truck models were analysed - the FH Aero 6x2 and the FM 6x2 - and both scored 5 stars.

"I am very proud that all four Volvo models that have been rated by Euro NCAP have received the top score. This confirms the outstanding safety performance of our trucks," says Roger Alm, president Volvo Trucks. "Our customers expect Volvo to be the best in safety and now we can



show them a third-party proof that we walk the talk and fulfil our promise to them. And we will continue to strive towards our vision of zero accidents."

In South Africa, the company says, Volvo FM range has over the years become a truck of choice for fleet owners due to its versatility, durability, efficiency and all-round performance. The company is also in the process of homologating and conducting local tests for the introduction of the FH Aero range in South Africa. A launch date will be announced once all these processes have been completed.

The maximum rating of five stars from Euro NCAP means that Volvo meets or exceeds criteria such as driver support and collision avoidance, delivering traffic safety for the driver and surrounding road users. This is in line with Volvo Trucks' vision of a zero-accident future, and the company will continue to develop safety systems that both provide protection but also that predict safety hazards and mitigate accidents.

Additionally, both Volvo models fulfil the so-called City Safe criteria, thanks to good vision and good performance of Volvo's active safety systems, designed to protect vulnerable road users in city traffic situations.

"Volvo is known all around the world for safety and it is also a core value for us and a cornerstone in our heritage, so this rating is proof that we are doing the right thing", says Anna Wrige Berling, traffic and product safety director, Volvo Trucks. "This does not mean that we can relax - with every new product launch we are striving to make our trucks even safer."



MAXIMUM POWER FOR HEAVY DUTY OPERATIONS





Two paths to safety: power station teams break records

STEINMÜLLER Africa has set a new benchmark in operational excellence with its site teams at the Kriel and Majuba power stations each exceeding one-million Recordable Case Rate-free hours. Recordable Case Rate (RCR)-free hours are operating runs without a single recordable injury or illness requiring medical treatment beyond first aid.

According to the company, this accomplishment, representing a new standard in industrial safety performance, was reached via two distinct paths: a rapid, eight-month campaign at Kriel involving 950 personnel during critical outages, and a sustained, three-year cultural initiative at Majuba.

The results provide a compelling proof-point that rigorous safety systems are a direct enabler of quality, efficiency, and reliable project delivery.

HIGH-VELOCITY PERFORMANCE

At Kriel Power Station, the achievement was a feat of speed and scale. Achieved between 11 August 2024 and 30 April 2025, the milestone occurred while the team executed complex work during critical planned outages. This high-velocity performance was engi-



The foundation of zero harm: A daily safety briefing for the Kriel team whose rigorous controls delivered one million hours without a recordable injury.

neered through a non-negotiable framework of daily controls, including rigorous toolbox talks, continuous risk assessments, dual Eskom and SMA permit-to-work systems, and visible leadership walkabouts.

Targeted technologies, such as drone inspections to identify maintenance leaks, were strategically deployed to minimise human exposure in high-risk zones. To mark the achievement, team members were awarded commemorative milestone jackets, reinforcing

the value placed on their collective discipline.

The Majuba achievement showcases the power of long-term cultural discipline. Over three years, the team forged its million-hour record not with temporary measures, but with a deeply embedded philosophy of shared accountability, the company says. This commitment permeated every level of the operation, from site management and planning to skilled and unskilled trades.

The team's operating rhythm was defined by

empowered hazard reporting, continuous skills refreshers, and a core principle of keeping safety procedures 'live, not laminated'. With milestone jackets now awarded, the team has already set its next target: the two-million RCR-free hour mark.

"These results showcase two paths to operational certainty," said Rudolph Botha, group manager: HSE, Steinmüller Africa. "Kriel demonstrates high-tempo execution under pressure, while Majuba proves the power of a three-year cultural marathon. Both confirm that zero harm and quality delivery are the same discipline, earned through thousands of correct decisions on the ground."

A client representative added, "A million incident-free hours isn't just a safety metric; it's a performance advantage that translates directly into schedule reliability and quality."

The focus now shifts to the future. Majuba is targeting its next milestone of two-million RCR-free hours, while Kriel is focused on sustaining its high-performance momentum.

With these twin achievements, Steinmüller Africa has demonstrated what is possible. The focus now is to make this exceptional standard of zero-harm performance the repeatable expectation on every project, every day, the company said.

Driving safety and strategy through intelligent electrical design

By Suvern Moodley, EcoConsult business development manager, field services Anglophone Africa at Schneider Electric

OPINION | INNOVATIVE electrical design software is no longer a luxury but a strategic imperative. These platforms empower engineers and project leaders to model, simulate and analyse complex electrical systems with precision, enabling risk mitigation and informed decision-making.

By identifying potential hazards such as electric shocks, fire risks and equipment failures before they occur, it safeguards personnel, protects critical assets and ensures uninterrupted operations. The result is not just enhanced safety and reliability, but also improved compliance, reduced downtime and stronger long-term planning, which form the key pillars of sustainable infrastructure delivery.

Through advanced modelling, calculation and simulation, Schneider Electric's Electrical Transient Analyser Programme ETAP enables the company to proactively identify and mitigate electrical risks before they occur. It supports reliability studies by analysing scenarios like Mean Time to Failure (MTTF) and Mean Time to Repair (MTTR), helping the company to anticipate equipment breakdowns and plan for contingencies such as power outages and production downtime.

In addition to reliability assessments, ETAP also facilitates critical safety evaluations, including arc flash studies. These are essential for compliance with the Occupational Safety and Health (OSH) Act, ensuring that employers provide a safe working environment free from life-threatening hazards and unnecessary exposure to risk.

What sets ETAP apart is its proactive approach. By generating insights ahead of time, before teams are even on site, it empowers Schneider Electric with situational awareness and informed decision-making.

ing. This foresight enhances both operational safety and continuity, aligning with the company's commitment to excellence and stakeholder assurance.

Traditionally, electrical design tools are used at the conceptual stage, where engineers model and plan system architecture. Once a facility is operational, Supervisory Control and Data Acquisition (SCADA) systems take over, allowing operators to monitor and control real-time performance. However, this handover

often creates a disconnect as SCADA tools are limited in their ability to address compliance, energy efficiency, predictive maintenance and downtime planning.

This is where ETAP comes in, strategically bridging the gap between design and operation. By integrating real-time data with simulation capabilities, ETAP enables teams to run offline studies using actual facility parameters.

This forms the basis of a digital twin: a virtual replica of the physical system that mirrors

its behaviour, performance, and risks. Digital twin technology offers a powerful advantage in modern infrastructure planning as it mirrors the exact electrical and operational parameters of a physical facility, enabling simulation without direct exposure to the site.

This virtual replica allows engineers and operators to run scenario analyses and stress tests on the system design, using real-world data to evaluate performance under extreme conditions.



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Wind energy conference explores policy as well as execution

THE first day of Windaba 2025, hosted by the South African Wind Energy Association (Sawea) at the Cape Town International Convention Centre, opened with a decisive call to action from Minister of Electricity and Energy, Dr Kgosisentsho Ramokgopa. Delivering the keynote address, he laid out South Africa's blueprint for an inclusive, secure, and sustainable energy future – one driven by reform, industrialisation, and partnerships.

The Minister's address centred on the Integrated Resource Plan (IRP) 2025. The plan, he said, will ensure the security of electricity supply by balancing demand with environmental responsibility and cost of supply, while pursuing a diversified energy mix aligned with global decarbonisation trends.

"Our priorities are clear," said Ramokgopa. "We must achieve universal access to available, affordable, and quality energy; attain sovereign and regional energy security; drive industrialisation and lead innovation; qualitatively transform our energy demographics; and assert South Africa's leadership across the continent and globally. These objectives underpin our ambition to move towards a high-growth trajectory powered by sustainable development."

The Minister acknowledged that the past 15 years of energy insecurity have constrained



growth but noted the shift underway. "Coal still dominates, but renewables are growing fast," he said. "Solar PV and wind additions now make up nearly 80% of new capacity across sub-Saharan Africa, and South Africa continues to lead the region."

Reforms will be key in producing South Africa's electricity generation capacity. To this end, the Minister highlighted eight reforms that are being focused on, including the New Wheeling Framework (2024); Market Rules for Transmission Access; amendments to the Electricity Regulations on New Generation Capacity (2020 - 2023); Draft Electricity Transmission Regulations; The Grid Capacity Allocation Framework (2024); Wholesale Trading Reforms; and the success of the IRP, JET Framework, SAREM, and Gas

Master Plan.

"These reforms are not just technical adjustments. They are the levers to unlock South Africa's energy future – accelerating transformation, driving industrialisation, and ensuring that the benefits of our energy transition are led by South Africans, for South Africans," concluded Minister Ramokgopa.

With the Minister's keynote setting the tone for action and alignment, the day moved to the first plenary session and turned attention to the infrastructure required to make this vision possible.

The opening plenary, "Wire for Growth", shifted the spotlight from policy vision to the infrastructure and regulatory reforms needed to unlock the country's renewable energy potential. Central to this was how to ensure equitable grid access and manage curtailment as the energy mix grows more decentralised and dynamic.

Monde Bala, chief executive of the newly established National Transmission Company of South Africa (NTCSA), outlined the entity's progress in setting up a dedicated Grid Access Unit to streamline and standardise access to the transmission network.

He explained that the interim grid-access rules have already been publicised and are now with the regulator for consideration.

"We need to get to a point where this is codified, so it becomes a licence condition," said Bala, stressing that clear, enforceable rules would provide certainty to investors and IPPs. He added that a practice note has been issued on the forthcoming curtailment framework, with the NTCSA planning a workshop early next month to unpack its implementation.

From the generation side, Rivoningo Mnisi, head of renewables at Eskom, offered a candid view of the utility's evolving role in the new energy landscape. Mnisi acknowledged the challenge of Eskom acting as the system operator responsible for maintaining grid stability while also participating in energy generation.

Mnisi noted that while Eskom's unbundling was designed to improve efficiency, the transmission operator would remain a monopoly. However, he emphasised that on the generation front, the utility must now operate under the same regulatory framework as IPPs, particularly when developing large-scale projects in partnership with them.

The discussion underscored the need for transparent governance, predictable regulation, and a coordinated approach to grid access.

SA's newest hydro plant gets certified and adds to the grid

GROWTHPOINT Properties, a leading Real Estate Investment Trust (REIT), has acquired a 30% stake in the Boston Hydroelectric plant, a new R390 million development with an operational lifetime of over 40 years.

The independent power producer Serengeti Energy is the developer, constructor and operator of the 5 MW run-of-river hydropower plant located on the Ash River within the Lesotho Highlands Water Project.

Boston Hydro is the largest of six hydropower facilities along the Ash River and represents Serengeti Energy's fourth operational hydro plant in South Africa. The plant will generate approximately 30 GWh of renewable electricity annually, providing reliable 24/7 baseload power to Growthpoint's eco2 network through Etana Energy's wheeling framework. This makes Boston Hydro a cornerstone of Growthpoint's renewable supply mix.

The country's newest hydroelectric plant was certified for commercial operations by Eskom on 17 October 2025 and has already started adding renewable energy to the national grid, according to Growthpoint.

As early as 2023, Growthpoint secured exclusive access to all the approximately 30 GWh of renewable electricity generated by the plant annually, through its landmark 195 GWh power purchase agreement (PPA) with licenced energy trader Etana Energy. Boston Hydro is the first project to come online in a mix of cost-saving, certified zero-carbon hydro, wind and solar electricity generation projects powering the PPA.

The renewable electricity from Boston Hydro will supply 23 Growthpoint buildings, including 10 in Sandton Central and three in Cape Town.

Growthpoint's 30% stake in Boston Hydro continues its investment in renewable electricity sources and furthers its green energy transition which began more than a decade ago. The property group took its first steps into rooftop solar generation in 2011, from which it has grown a track record of practical, scalable, carbon reducing energy solutions for its business, tenants and South Africa.

Since its first installation, the property group has invested more than R1 billion in solar energy locally, grown one of South Africa's largest Small Scale Embedded Generator (SSEG) renewable energy fleets and linked it to transparent certification frameworks.

Growthpoint owns a fleet of 80 rooftop plants across its portfolio delivering 61.2 MWp of capacity and generates a significant amount of clean electricity annually. A further 7 MWp of solar installations are in the pipeline for commissioning by mid-2026.

Growthpoint now operates and procures one of South Africa's most diversified private renewable energy portfolios, combining solar and hydro generation, with wind soon set to join its renewable energy mix as part of the PPA.

Together with its rooftop solar, when its PPA with Etana Energy is fully operational, approximately 40% of Growthpoint's total electricity demand will be supplied from renewable energy.

Powering up transparency too, Growthpoint verifies its renewable energy by registering the electricity generated on the International Renewable Energy Certificate (I-REC) registry via Fuel Switch, Africa's first blockchain-enabled REC exchange. This ensures global transparency, traceability and accountability across its clean-energy portfolio.

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State-of-the art Tongaat DC strengthens retailer's capacity

BOXER Superstores officially opened its 32,000 sqm state-of-the-art Distribution Centre (DC) in Tongaat north of Durban on 8 October.

Co-owned 50/50 with long-standing property development partners JT Ross Property Group, the company said the facility stands as a testament to strategic collaboration, operational excellence, and sustainable development.

Construction began with a sod turning on 24 October 2024, and less than a year later, the facility is fully operational. Inbound stock began arriving on 1 September 2025, with the first stores receiving deliveries by 24 September 2025.

Speaking at the official opening event, Boxer CEO Marek Masojada shared his pride in the completion of the project, highlighting the significant impact the DC will have on the retailer's logistics operations. "This new facility enhances our capacity, efficiency and resilience,"

said Masojada. "It also allows us to get closer to our stores, ensuring better stock availability, shorter lead times, and more frequent deliveries."

The Tongaat DC mirrors Boxer's Benoni DC in size and features, with an additional 10,000 square metres of potential expansion built into the site design. It has also been designed to support future solar energy integration and includes 1.5 million litres of underground water storage, which will feed its truck wash bays.

ADVANCED FEATURES

The facility's advanced features include state-of-the-art racking locations, automat-



The New Boxer Tongaat Distribution Centre is well equipped to take Boxer into the future

ed pallet jacks, reach trucks and forklifts, all operating with lithium-ion battery systems that improve energy efficiency and safety. Currently, the DC employs 359 team members across three shifts, including 73 staff transferred from other Boxer DCs. Of these, 44

have received promotions, reflecting Boxer's ongoing focus on internal growth and development. At current size, the Tongaat DC will service up to 120 stores, easing pressure on other Boxer DCs including Lynnfield Park (KZN) and Imonti (Eastern Cape) all the while positioning the Discounter to handle future import logistics directly through its own network.

"Our supply chain model is built around agility and proximity," said Boxer's group executive: supply chain, Justin Galloway. "Smaller, regional DCs allow us to serve stores faster and reduce operational risk."

With advanced training and boardroom facilities, the Boxer Tongaat DC will also serve as a multipurpose hub for development, meetings and collaboration across the business.

The company said the new DC demonstrates its continued commitment to growth, innovation and investment in South Africa's logistics infrastructure ensuring that it remains close to the communities it serves.

Automotive SME accelerator programme launches in Durban

TOYOTA South Africa Motors has launched the 2025 Durban Automotive Cluster SME Accelerator – a public-private partnership between the eThekweni Municipality and the regional automotive cluster. The programme is a strategic initiative aimed at strengthening South Africa's automotive supply chain through the development of high-potential, black-owned Small and Medium Enterprises (SMEs).

The programme is designed to unlock new commercial opportunities for emerging suppliers, positioning them as competitive Tier 2 and Tier 3 contributors to the automotive value chain. The Accelerator directly supports the objectives of the South African Automotive Masterplan (SAAM) 2035, with a strong focus on localisation, transformation and skills development.

Commenting on the Durban Automotive Cluster (DAC) SME Accelerator programme, Andrew Kirby, president and CEO of Toyota South Africa Motors said, "At Toyota South Africa Motors, we believe that inclusive growth is not just a goal but a responsibility. The DAC SME Accelerator is a strategic platform to empower black-owned businesses, strengthen our local supply chain and ensure that transfor-

mation is embedded in the DNA of our industry. We are therefore inviting all stakeholders in the automotive sector to be part of this journey toward a more inclusive, competitive and resilient industry."

The Accelerator is about building bridges between established industry players and emerging entrepreneurs. To this effect, the participation of Tier 1 suppliers is critical to the success of the programme. By partnering with Toyota South Africa Motors (TSAM) and the DAC, Tier 1 suppliers will drive industry transformation by mentoring and supporting emerging black-owned businesses. Additionally, participating in the programme will enable Tier 1 Suppliers to align their localisation and supplier development goals with their Broad-Based Black Economic Empowerment (B-BBEE) strategy.

"The DAC SME Accelerator is more than a programme – it's a catalyst for inclusive growth and industrial resilience. By empowering black-owned SMEs, we're not only diversifying the supply chain but also building a future-ready automotive sector. We are glad to have Toyota South Africa Motors as a partner in driving transformation and shaping the future of the automotive sector. With support from the



industry, we believe that together, we can drive meaningful change and unlock the full potential of South Africa's automotive supply chain," said Meghan King, chief facilitator, Durban Automotive Cluster.

The DAC SME Accelerator builds on a strong foundation. In 2024, the programme attracted over 100 applications, reflecting its growing reputation and impact. Over the years, the Accelerator has catalysed significant growth for both SMEs and large corporations, fostering a more inclusive and robust automotive ecosystem.

The Accelerator provides strategic insights

into enhancing supplier capability, competitiveness and resilience; real commercial opportunities aligned with industry needs; and a platform to foster meaningful partnerships between established suppliers and emerging enterprises. During the programme, selected SMEs will undergo intensive preparation to develop compelling business pitches, culminating in a high impact "Dragons' Den" event where they will present to potential customers and industry leaders.

"We are proud to support a programme that not only develops supplier capability but also creates meaningful opportunities," said Kirby.

The role of different zinc coatings in corrosion protection

THE International Zinc Association (IZA) Africa has emphasised the essential role of zinc-based coatings in extending the service life of steel across multiple industries. Used for decades to counteract both aqueous and atmospheric corrosion, zinc coatings protect steel through three distinct yet complementary mechanisms: barrier protection, cathodic or sacrificial protection and the formation of inhibiting corrosion products.

Barrier protection isolates the steel substrate from corrosive agents and ensures that the zinc layer corrodes first. However, barrier action remains effective only as long as the coating is of sufficient coating thickness and bare steel is not exposed. However, in cases where the coating is scratched or suffers limited damage, zinc continues to protect the steel

through galvanic action.

Since zinc is less noble than steel, it preferentially corrodes at these exposed sites, ensuring that the underlying substrate remains intact. Over time, zinc corrosion products such as zinc carbonate and zinc hydroxide form adherent films that act as inhibitors, further reducing the rate of corrosion and extending the durability of the system.

Hot dip galvanising remains the most widely applied zinc coating process for structural steel applications. In this method, steel is cleaned, pickled, fluxed, and immersed in molten zinc at temperatures between 435°C and 455°C. The process forms a tightly bonded series of iron-zinc alloys that envelops the steel entirely, including recesses and internal cavities.

Batch hot dip galvanising produces relatively

thick coatings, often exceeding 85 µm, which ensures long, maintenance free service lives for steel used on bridges, electrical pylons, rebar in concrete and other heavy structural steel components.

By contrast, continuous hot dip galvanising of steel sheet, performed on high-speed lines at integrated steel mills, produces thinner coatings in the range of 15 to 20 µm per side. It is normal to apply an organic primer and topcoat over the galvanised layer, which gives a very good product. In South Africa we have Chromadek Ultim and Bluescope Colourbond Ultra as examples of this product.

Uncoated continuously galvanised sheet products are highly suitable for applications such as automotive body panels, roofing materials and consumer goods. Coating thickness

remains the critical determinant of service life, as galvanised steel corrodes in a linear fashion over time.

In highly corrosive marine environments, Galfan has proven to be a particularly effective coating. This zinc-aluminium eutectic alloy, comprising 95% zinc and 5% aluminium, with trace mischmetal, was designed to provide a zinc rich coating without the formation of brittle intermetallics at the steel interface.

The resulting two-phase microstructure corrodes according to a parabolic rate law, slowing down over time and providing nearly double the operational life of conventional continuously galvanised coatings. Galfan is widely applied to wire, strand, rope and tubing where formability and long-term performance are critical.



Prospecton firm expands industrial tape manufacturing with new slitter

WILEC, a leading manufacturer and supplier of electrical products and technical solutions, officially launched its new employee-owned slitting machines at its Prospecton manufacturing facility in Durban on 17 October.

The machines will be dedicated to the production of industrial tapes under Wilec's well-known AVAST brand, which supplies high-performance insulation and technical tapes to industrial, electrical and energy sectors across the continent. The company said the newly commissioned machines mark a key milestone in Wilec's commitment to local manufacturing, employee empowerment, and industrial innovation.

The acquisition of the machines was made possible through the support of the Department of Trade, Industry and Competition (the DTIC)



and the Industrial Development Corporation (IDC), which jointly assisted Wilec employees in purchasing the equipment. "This partnership

represents a progressive step toward broadening economic inclusivity and strengthening employee participation in South Africa's manufacturing landscape," the company said.

"The commissioning of these slitting machines is a proud moment for us at Wilec," said Nene Mathebula, CEO of Wilec. "It represents more than just an investment in production capacity, it's an investment in our people. Through this initiative, we are

creating opportunities for shared ownership, skills growth, and sustainable local manufacturing."

The new slitting machines bring enhanced speed, precision and consistency to the production process, supporting Wilec's goal of improving efficiency and meeting growing demand for industrial tapes across Africa.

"We're proud that our employees are at the heart of this advancement," added Mathebula. "It demonstrates the power of collaboration between government, industry, and the workforce all working together to build a stronger, more inclusive manufacturing economy."

According to the company, the launch celebration at the Prospecton facility marks not only a technological milestone but also a testament to Wilec's enduring mission to power Africa's transformation through engineering excellence.

Successful long-term infrastructure projects require a focus on mentorship

OPINION | THE delivery of quality infrastructure projects is inseparable from a commitment to continuous professional development, particularly through mentorship, asserts Makhaotse Narasimulu and Associates (MNA) Consulting Engineers.

With decades of combined experience, MNA underscores that sustained mentorship promotes technical excellence, risk mitigation and leadership development, critical for long-term project success.

Infrastructure projects are complex, often spanning multiple years from conception to completion. Engineers involved in these projects learn through practical experience that mentorship amplifies the lessons acquired throughout a project lifecycle.

Agilen Moodley (*pictured*), director of human resources MNA, emphasises that attending to mentorship continuously enables knowledge transfer, allowing lessons learned on one project to improve outcomes on subsequent ventures.

"You cannot grow without mentorship," says Moodley. "Engineers entering the industry often possess strong theoretical foundations but limited practical exposure. Mentorship bridges this gap, helping young professionals navigate the often-complex developmental stages from student to professional engineer," he notes.

MNA's mentorship model ensures that junior engineers are not confined to narrow tasks but are exposed to a broad spectrum of engineering functions.

This rotational experience builds a foundation of understanding across water, transport and structural disciplines, empowering engineers to develop holistic views and problem-solving skills. The firm's approach also recognises the limited availability of experienced mentors across the sector by expanding middle management roles, which provides peer mentorship and leadership guidance.

"Middle management, being closer to day-to-day project work, is well-positioned to offer timely advice and insights that are directly relevant to junior engineers' immediate tasks and development goals. It's not just about senior directors mentoring juniors anymore. Middle managers have become the backbone of mentorship, offering continuous lead-

ership and peer guidance. They form the vital link bridging the experience gap while expanding leadership capacity within the company," Moodley highlights.

Another benefit of the MNA mentoring programme, he said, is that the Water and Sanitation division is now majority-led by females who were previously underrepresented in leadership roles.

Through regular project collaboration, knowledge sharing sessions and formal appraisals, mentorship becomes embedded in everyday business operations at MNA.

Importantly, the company promotes secondments with municipal partners, offering mentorship to public sector engineers for skills transfer. These partnerships help build institutional capacity within municipalities, enabling engineers to register professionally and contribute effectively to critical infrastructure projects that serve communities.

While constraints such as time pressures present challenges to sustained mentorship, MNA's structured approach – with clear career pathways, defined mentorship goals, and performance-linked progression – helps overcome these obstacles. The company fosters a culture of shared responsibility, where mentors and mentees actively engage in continuous learning.

Mentorship also plays a vital role in fostering ethical and responsible practice among engineers, essential for infrastructure projects that impact public safety and wellbeing. "In mentoring, we don't just pass on technical knowledge but cultivate engineers' ethical resilience – preparing them to stand firm on principles, raise concerns, and make decisions that may not always be easy, but are right," Moodley states.

Engineers trained under such mentorship are better prepared to meet regulatory requirements, standards, and community expectations. "Ethical mentorship is fundamental because the infrastructure projects we deliver affect entire communities. It's our duty to ensure that every engineer we train understands their responsibility."

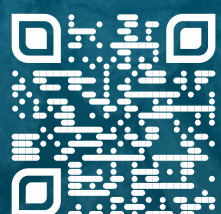


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High-performance radial shaft seals designed for extreme applications

STELLEBORG Sealing Solutions, a global leader in sealing technology, has launched an innovative high-performance radial shaft seal portfolio, Stefa, designed to redefine performance standards under extreme application conditions.

Built on cutting-edge innovation, the company says the range has been created for modern industrial environments characterized by high-volume production, 24/7 manufacturing, rapid machinery movement and the necessity to minimise downtime and cost while maximising operational efficiency.

Inderjeet Singh, global product line director rotary seals, says: "Meticulously engineered to reduce frictional torque, the new Stefa® High-Performance Radial Shaft Seals lower energy consumption and increase uptime, lowering costs. Breaking conventional design methodologies, these seals deliver more consistent sealing performance over a longer period of

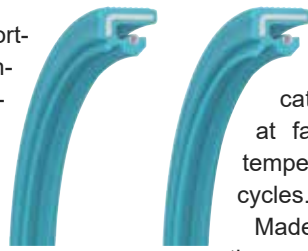
time.

"The Stefa High-Performance portfolio is proven to outperform conventional rotary seals, providing customers with efficient, durable solutions to the extreme duty cycles, higher speeds and challenging operating conditions of today's rotary sealing systems."

Two new sealing profiles make up the range. The TRA type is designed without a dust lip for minimal frictional torque, making it ideal for clean environments where contamination isn't a significant concern and space is limited.

The TRE type features a dust lip for robust protection in contaminant-prone environments. It protects rotary applications even in environments that require high ingress prevention while maintaining operational efficiency.

Created from proprietary materials, the Stefa high-performance portfolio offers vir-



tually leak-free sealing and wider chemical compatibility for today's challenging applications, proving their capability at faster rotary speeds, in harsh temperatures and across heavy-duty cycles.

Made to be consistent and durable, the company says Stefa high-performance seals reduce wear, extending maintenance intervals and increasing operational efficiency. Reduced frictional torque across all shaft diameters, including smaller ones, means they outperform other designs to lower energy costs and increase sustainability for customers and end-users, according to the company.

Available now, they are stocked in common sizes with rapid global lead times for other dimensions and custom solutions to meet specific requirements.

The new range is suitable for applications like gearboxes and speed reducers, motors including AC/DC, induction and servo, pumps and fans, conveyor systems, index tables, machine tools and robotics.

David Kaley, global segment manager industrial automation, says: "The Stefa High-Performance range was designed to excel in the increasingly tough applications environment for radial shaft seals across the wide range of industries where they are essential.

"The new TRE and TRA seals meet today's challenges while reducing frictional torque, wear and maintenance cycles. Up to 70 per cent of electricity used in factories comes from electric motor systems. While seals might seem like a small, insignificant component, the Stefa High-Performance range reduces power consumption attributable to the seal by 15 to 25 Watts, a direct result of reduced friction."

A sustainable solution to protecting groundwater from oil spills

FIBERTEX Nonwovens has developed a dependable and sustainable solution to protect groundwater from oil spills. EnviTex Oil is an advanced geotextile solution engineered to integrate passive filtration with enhanced bioremediation performance. It intercepts and degrades petroleum hydrocarbons in soil and groundwater.

"As urbanisation increases and oil consumption continues to rise, the accumulation of hydrocarbon pollution in surface run-off and subsoil poses a growing environmental risk in many sectors," says Brian Potgieter, technical sales engineer, Fibertex Nonwovens South Africa. "Petroleum hydrocarbons – due to leaks and spills from oil tanks, trucks and cars – have toxic properties that are harmful to plant and animal life, which is why it has become increasingly important to minimise the effects of oil pollution. The Fibertex solution is bioremediation, which makes use of micro-organisms that are environmentally friendly and cost-effective, compared to conventional physical and chemical treatments.

"EnviTex Oil, which offers a sustainable, low-intervention response to oil pollution, is constructed from optimised polypropylene fibres with dual functionality, acting as a technical geotextile and as a substrate for microbial degradation.

"EnviTex Oil is treated with a specialised finish that not only improves absorbency but also releases nutrients that promote the growth and metabolic activity of indigenous microorganisms, accelerating the biotransformation of pollutants into carbon dioxide and water. The fabric acts as a barrier that retains pollutants while allowing water to percolate through. This product can also be integrated into drainage systems to skim hydrocarbons from runoff before they reach sensitive aquifers or stormwater infrastructure. If contaminant levels exceed the rate of degradation, the fabric can be easily replaced without excavation or structural modification.

"Independent testing laboratories confirm EnviTex Oil's ability to absorb up to eleven times its own weight in petroleum hydrocarbons. The product has demonstrated a total degradation capacity of 200 ml m² per year

under controlled conditions, with consistent performance across a range of petroleum-based contaminants.

"This process requires no external energy input or chemical dosing and is influenced by variables, like soil composition, pH, temperature and moisture. These conditions are optimised by the material's permeability and its capacity to retain moisture, both of which support microbial viability," explains Potgieter.

EnviTex Oil, which has recently been launched into the African market, meets stringent quality and environmental specifications

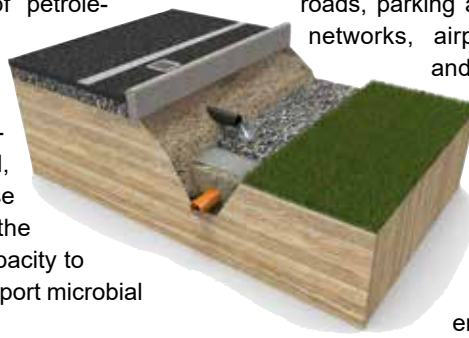
and is suitable for dependable use beneath roads, parking areas, garages, rail networks, airports, construction and mining sites, as well as fuel handling facilities.

This advanced product delivers continuous, passive mitigation of oil pollution in environments where exposure risk is high and where conventional remediation methods are impractical. By isolating and degrading hydrocarbons

in situ, the product reduces pollutant load in natural drainage systems and contributes to the long-term protection of groundwater quality.

The ability to trap and degrade petroleum hydrocarbons directly beneath hard infrastructure is increasingly important for urban resilience and ecosystem health. The launch of this new product means the local market is able to safely embed environmental performance into the structure of the built environment.

EnviTex Oil aligns with the sustainability objectives of the Fibertex Nonwovens group, which is committed to the ongoing development of high-performance, environmentally responsible geotextiles.



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New energy standards create opportunities for electric motor users

SOUTH African regulations on premium efficiency IE3 motors open a door of opportunity for geared motor users, says SEW-EURODRIVE, but forward planning and the considered advice of established and trusted experts is vital.

With the Minimum Energy Performance Standards (MEPS) now mandatory since June 2025, many users of electric motors might be confused about their next step. Willem Strydom, SEW-EURODRIVE's manager for business development electronics warns that users may be vulnerable to poor decision-making due to uncertainty and opportunistic buying.

"Having supplied IE3 motors as standard in our relevant geared units for some years already, and at no

added cost, there is nothing in the regulations surprising to us or our customer base," explains Strydom. "However, there are still many players in the market who might not be up to date with the regulatory developments – and we are well placed to be of service."

He notes that some companies may feel pressurised by what he calls "fear-mongering messages" in the market to unnecessarily replace less efficient motors. On the other hand, the looming moratorium on the sale of IE1 and IE2 motors may lead to these units being 'dumped' on the market at cut-rate prices. This may tempt companies to buy old technology that will cost them dearly in terms of energy consumption.

"The regulations remind the market



of the financial and sustainability value of using more efficient motors – but the real benefit lies in system efficiencies," says Strydom. "This is where companies can benefit the most when planning their shift to IE3 motors."

Natasha Meintjies, business devel-

opment electronics proposal engineer at SEW-EURODRIVE, explains that the customer journey often begins with an energy efficiency test – which SEW-EURODRIVE conducts at no cost at the customer's site.

"By measuring the energy consumption on the customer's existing motors and comparing this to our IE3 motors, we can provide them with an energy cost saving analysis," says Meintjies. "There is typically an immediate cost saving of 4 to 8% of the motor's power consumption, but more significant benefits can be achieved when moving to system level."

This includes SEW-EURODRIVE's more energy efficient drives, which can take the energy savings to another level – up to 20 to 30%, she says. These results are achieved from integrating the latest monitoring and optimisation technologies into the system.

"This also gives the customer more overall process stability and reduced maintenance costs," she says. "Our modular designs ensure that all the components work together seamlessly for the best efficiencies and performance, making the whole system more reliable."

Strydom highlights that SEW-EURODRIVE's global research and development has ensured

that the company already has 'super premium efficiency' IE4 and 'ultra-premium efficiency' IE5 motors in its market offerings already.

"Our in-house laboratory in Germany is also third-party approved to test our motors for energy efficiency – as the IE3 benchmark has been mandatory for some years in Europe," he says. "The test certificates that we issue are therefore accepted by South Africa's national regulator; we worked on this well in advance to be ready for these regulations."

He points out that MEPS will be a valuable enabler for companies to mitigate the effect of rising power costs, especially as they reassess their drive systems with an integrated approach in mind and with experts like SEW-EURODRIVE to advise.

The MEPS specification applies to a broad range of three-phase, low voltage electric motors with rated power output between 0,75 kW to 375 kW and includes motors with non-standard mechanical dimensions and geared motors. Motor users are permitted to run their existing IE1 and IE2 motors until they need to replace them due to failure. From a retailer's point of view, these IE1 and IE2 motors are allowed to be sold until May 2026.

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New frequency counter with wide range and high resolution

COMTEST'S B&K Precision, a leading designer and manufacturer of reliable, cost-effective test and measurement instruments has launched new Series 1820B Universal Frequency Counters. These compact and versatile instruments are designed for a wide range of frequency measurement applications, from telecommunications to verification and validation of oscillators.

The 1820B Series features a clear 0.5" LCD and support for frequency, period, ratio, pulse width, and event counting measurements.

This series uses a reciprocal counting technique to provide high resolution at all frequencies, from 1 mHz to 3 GHz (1823B) or 6 GHz (1826B). The counters deliver 8 significant digits in 1 second of measurement time, 9 digits in 10 seconds, and 10 digits in 100 seconds.

Equipped with a high-quality temperature-compensated internal frequency reference, the

1820B Series provides exceptional stability and accuracy, with a low aging rate of ± 1 ppm across the entire temperature range. Input A offers flexible sig-



nal conditioning over DC to 125 MHz, with configurable coupling (AC or DC), input impedance (1 M Ω or 50 Ω), attenuation (1:1 or 5:1), threshold (fully variable) and active edge. Input B provides 50 Ω impedance from 80 MHz to 3 GHz. The 1826B also includes an additional input C with an N-type connector, 50 Ω input impedance, and a frequency range of 2 GHz to 6 GHz.

The 1820B Series provides a USB interface for remote control and powering the device via a computer. Additional powering options include continuous AC operation with the supplied AC charger or up to 24 hours on internal battery power.



Significant enhancements with latest PCB design software

RS South Africa has announced the local availability of DesignSpark PCB version 13, the latest evolution of its award-winning PCB design software.

Sponsored by Würth Elektronik, a leading manufacturer of electronic and electromechanical components, this release delivers significant enhancements to PCB design functionality while empowering engineers, students, and innovators across South Africa.

Since its launch in 2010, DesignSpark PCB has remained committed to providing accessible, professional-grade design tools for engineers of all levels. Over the years, the platform has become an essential tool for South African students, start-ups, and SMEs who are innovating across industries such as telecommunications, renewable energy, automotive and advanced

manufacturing.

The new release introduces advanced capabilities to make PCB design more powerful and intuitive, including:

- Enhanced graphics: Improved rendering and visual clarity for smoother design experiences and high-resolution outputs.
- Set symbol origin at centre of pads: Simplifies alignment and improves accuracy in component placement.
- Serpentine routing: Ensures high-speed signal integrity in dense spaces with advanced trace shaping.
- Archimedean spiral generator: Updated to enable compact antenna design for wide bandwidth wireless communication.
- Interactive BOM Export: Makes prototyping easier by visually correlating components in the BOM



with their PCB placement.

According to the company, these updates strengthen its commitment to South Africa's engineering community, making advanced tools more accessible to local innovators who are working to solve real-world challenges.

Pete Wood, director of DesignSpark, comments: "DesignSpark PCB has always been about making powerful design tools accessible to engineers

everywhere, and version 13 is a major milestone in that journey.

"We believe that great designs start with the right components. Supporting DesignSpark PCB version 13 is a natural extension of our commitment to empowering engineers with the tools they need to innovate confidently," adds Simon Leuz, head of global distribution at Würth Elektronik.

Wesley Hood, education and social impact specialist at RS South Africa, highlights that tools like DesignSpark PCB version 13 are game changers for South Africa's engineers, makers and students. "By providing world-class, professional-grade design capabilities at no cost, RS is lowering the barriers to entry for innovation."

This means young innovators,

start-ups, and SMEs can compete on a global level, accelerate their ideas, and contribute to building solutions that address South Africa's unique challenges.

DesignSpark PCB forms part of the comprehensive suite of engineering tools and resources available on the DesignSpark website, which includes mechanical and circuit simulation software, technical articles, community forums, and a vast library of components and reference designs.

With these resources, RS South Africa continues to invest in enabling local talent, driving digital skills development, and ensuring that the country's engineering community has access to the latest global technologies.

RS South Africa is a trading brand of RS Group plc, a global provider of product and service solutions,

Rising demand for submersible dewatering pumps drives growth

IPR (Integrated Pump Rental), a leading specialist in dewatering and dredging solutions, has reported seeing strong demand growth for its ranges of submersible pumps across Southern Africa. This trend is being driven by the continued expansion of mining activities, infrastructure upgrades and the need for reliable water management solutions in both surface and underground operations.

The company, as part of Atlas Copco's Specialty Rental Division, supplies a comprehensive range of electric submersible pumps including the robust Atlas Copco WEDA dewatering, sludge and heavy-duty slurry pump ranges. These units are engineered to handle the demanding conditions found in applications such as sump dewatering, open pit dewatering, slurry movement and general water transfer duties. IPR's technical teams work closely with customers to



match the right pump to each application – whether it involves clean or dirty water, high solids content or abrasive slurry.

The Atlas Copco WEDA submersible pumps are widely recognised for their portability, efficient performance and durability in harsh conditions. These pumps are ideal for drainage

and sludge pumping tasks in both mining and construction environments. The range includes options for light to heavy sludge and slurry, with various motor and impeller configurations available to meet site-specific needs.

Furthermore, the WEDA L range of heavy-duty slurry pumps stand out for their ability to pump highly abrasive slurries with high solids concentrations. Fitted with agitators and specially designed impellers, these pumps are built to perform in environments where conventional pumps would fail, such as in settling ponds, slurry dams, and dredging operations.

IPR offers both rental and outright purchase options across its submersible pump fleet, giving customers flexibility based on their project timelines and budgets. This model has proved especially attractive for

operations looking to reduce capital expenditure while maintaining access to high quality equipment and responsive technical support. Rental contracts can be structured to suit short, medium or long term needs and are supported by IPR's maintenance and service teams to ensure ongoing performance.

The company's ability to assess application requirements, specify the right equipment and deliver

rapid support has made it a trusted partner to the mining, construction and industrial sectors. With demand for submersible dewatering and slurry pumps showing no sign of slowing, IPR's investment in high performance equipment – backed by global OEM partnerships – continues to position it as a market leader in tailored dewatering solutions.

General-purpose grease formulated for harsh conditions

SKF is proud to introduce LGCC 2, a general-purpose grease that has been specifically formulated to provide exceptional performance and dependability in a wide range of lubrication systems, providing long-lasting protection of critical machinery in some of the harshest operating conditions.

"What sets LGCC 2 apart is its advanced formulation, engineered to deliver consistent, high-performance lubrication with exceptional low-temperature fluidity," explains Eddie Martens, SKF product manager - MaPro. "This ensures that LGCC 2 grease maintains effective lubrication even in sub-zero environments that commonly challenge conventional

lubricants. As a result, LGCC 2 presents a highly trusted solution for industries where equipment operates under cold, wet and corrosive conditions."

The high-performance grease also offers excellent water resistance, preventing washout in humid or wet environments. Moreover, it provides superior corrosion protection, extending component life and reducing maintenance requirements.

Suitable for lubrication systems operating in low to medium temperature ranges, LGCC 2 offers a smart solution for a broad range of demanding applications. These include construction machinery, forestry and agricultural equipment, collector trucks

and chassis systems. "It is especially effective in non-rolling bearing components such as hinges, joints, articulations, linkages, and slow-rotating sliding bearings or bushings," adds Martens.

To meet varying operational demands, the new grease is available in three convenient pack sizes: a 420 ml cartridge for targeted application, an 18 kg pail for mid-size operations and a 180 kg drum for large-scale industrial use.

SKF's LGCC 2 grease will continue to deliver reliable protection in sub-zero temperatures, wet environments and corrosive settings, protecting critical assets, ensuring consistent equipment performance and support.



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A total cutting, welding and grinding solution for dynamic SA agri sector

AGRICULTURE in South Africa is evolving. From on-site meat processing and precision fabrication to equipment repairs and infrastructure upkeep, today's agricultural operations are increasingly complex, self-sufficient and technologically driven. This shift is placing new demands on the tools the agri sector relies on — not just for efficiency, but for safety, hygiene and durability. First Cut, a leading South African supplier of professional cutting, welding, grinding and processing equipment, is aligning its offering to meet these changing requirements, ensuring that the tools behind agriculture evolve in step with the sector.

From meat processing to general farm maintenance, First Cut's diverse product portfolio addresses the full spectrum of agricultural applications. The company's reputation for local knowledge and manufacturing, quality, innovation and customer responsiveness has helped it become a trusted name in workshops, co-operatives and production facilities across the country.

"When people think of First Cut in agriculture, they often assume we only offer meat-cutting band saw blades," says Stuart Beck, sales director at First Cut. "But that is just the tip of the iceberg. In reality, band saw blades account for around 15% of what we supply into the agri sector. Our offering spans everything from welding electrodes and abrasives to pruning shears, clamps, measuring equipment and heavy-duty hand tools. We serve every aspect of the sector, from the co-operative ('co-op') counter to the abattoir floor."

In meat processing environments, First Cut's expertise and experience are particularly val-



uable. The company supplies a wide range of blades and tools tailored to specific applications, from carcass splitting and skinning to fine de-rinding of pork, or delicate de-skinning of salmon and tuna.

"Efficiency and hygiene are critical in meat processing," explains Beck. "We design our blades to balance speed with minimal waste. That means tighter cuts, less dust

and more product yield. For instance, our de-rinding blades are engineered with multiple angles so the operator can remove exactly the amount of fat they want; no more, and no less."

The company's blades are treated with food-safe oils and certified to comply with international hygiene standards, including those set by the United States Department of Agriculture (USDA). First Cut's welding products also meet strict safety requirements for food-grade machinery repair, ensuring operators can maintain high sanitation standards in production.

"Product safety is fundamental to us," adds CEO Ian McCrystal. "We do not compromise on the quality or traceability of our equipment. All of our blades are traceable through our ISO systems, giving customers peace of mind that they meet stringent global standards."

EVERY AGRI APPLICATION

Beyond meat processing, First Cut supplies tools to support a wide range of agricultural maintenance and production tasks. Whether it is welding repairs on implements and trailers, building or mending fences - or undertaking precision fabrication — First Cut provides the industrial-grade tools which farmers rely on

daily.

"Our range is broad, because our customers are multi-faceted," Beck says. "A single farm might have its own abattoir, conduct equipment repairs, build fences and run small-scale manufacturing. We supply solutions for all of those needs."

First Cut's equipment is designed for professionals and includes high-performance hacksaw blades and ergonomic knife handles designed to reduce the risk of carpal tunnel syndrome in heavy-use environments.

"We are not a DIY brand," McCrystal clarifies. "Our tools are built for production. The fact that some households or smaller operators also use them speaks to their reliability, but our design principles are rooted in industrial applications and industrial-grade performance."

TAILORED AND EVOLVING

Product development is shaped by customer requirements and grounded in deep technical expertise.

"We analyse every new agri-related application - whether it is processing livestock, welding machinery or cutting steel for construction, such as farm warehouses - and align our offering accordingly," says Beck.

With decades of experience in manufacturing and sourcing tools for demanding sectors, First Cut continues to grow its agricultural offering in step with the needs of South African farmers, co-ops and agri-processors. "We are proud to support the agri sector," says McCrystal.

"Farmers today are more self-sufficient than ever. They need robust tools they can depend on, and that is what First Cut delivers," he concludes.



Complex water tower project presented a challenge

AFRISAM is playing a pivotal role in the construction of an exceptionally large and technically complex water tower, supplying specially designed readymix concrete to meet both structural and seismic performance requirements. Located near Main Reef Road south of Johannesburg, the 43 metre high water tower will store 3,2 mega litres of water to support the new Goudrand mega city development.

With construction led by M&D Construction and engineering design by SCIP Engineering Group, the project has demanded highly customised concrete solutions from AfriSam. The structure is located in a seismically active zone and required additional reinforcement in the lower section of the shaft to withstand ground acceleration above 0,1g. This called for increased steel density and a concrete mix that could deliver strength, flowability and controlled heat of hydration.

AfriSam's product technical team leader, Mduduzi Ndlovu, explains that the concrete mix was developed with a high proportion of supplementary cementitious materials (SCMs) to reduce the heat generated during curing. "The base mix comprised 70% ground granulated blastfurnace slag (GGBS) and 30% AfriSam High Strength Cement, reducing the ordinary Portland cement (OPC) content to just 20%," says Ndlovu. "Despite the low OPC content, the mix exceeded expectations - achieving the target strength of 51 MPa was achieved in only 28 days in relation to the designed 56 day requirement."

The construction process placed high demands on the readymix in terms of both slump control and delivery precision. With over 210 kg of rebar per cubic metre in some sections, AfriSam developed a high slump pump mix for vertical pours, while limiting slump to 130 mm for slanted sections to avoid concrete sliding off shuttering.

Sheldon Temlett, contracts manager at M&D Construction, highlights the importance of this mix performance. "With such dense steel and complex geometry, AfriSam's mix gave us the workability we needed without compromising quality. Their team worked closely with us to adjust slump levels and plan deliveries around our 12 m³/hour pour rate."

AfriSam territory manager Toni Williams adds that logistics were carefully aligned with construction progress to avoid delays or idle time on site. "Coordination was key to supporting M&D's controlled rise rate of 1 metre per hour, especially as the concrete had to partially set before each formwork lift could proceed."

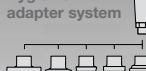
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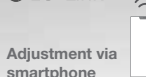
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Looking Forward

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Energy company recognised for its grid automation products and services

HITACHI Energy was recognised as the global market share leader in grid automation for electric power transmission and distribution utilities by ARC Advisory Group, a leading technology research and advisory firm for industry, energy and infrastructure. The findings are part of ARC's comprehensive market and technology study titled "Grid Automation Global Market Study 2024-2029", published in June 2025.

According to the report, Hitachi Energy is the No. 1 provider of grid automation products and services worldwide. The company was also recognised as the market share leader in key software categories, including grid control and management, outage management, and AI applications. ARC's study also revealed Hitachi Energy leads the market in a number of hardware categories, including Wireless and Wired Networks, Measurement devices, and RTUs.

"Grid automation is essential to operating and maintaining the modern grid," said Richard Rys, director



of consulting at ARC Advisory and lead researcher for grid automation. "Our extensive market share analysis of suppliers in this highly competitive space shows Hitachi Energy at the top of the leaderboard. We believe this company's deep-rooted heritage in energy, extensive domain expertise, the breadth and depth of their integrated solutions, and strong focus on digitalisation and AI/

ML capabilities will continue to drive their leadership in the industry."

The report points to substantial growth in grid automation software, hardware and services due to a changing mix of generation, new grid-storage assets, and new market structures such as virtual power plants and support for demand response. In particular, the report states growth is strongest in regions

building new electric grids or making major system upgrades or repairs due to weather events or wars that target and damage electric distribution systems.

"The grid automation market is at an inflection point, with rapid global electrification and the urgency of the energy transition placing unprecedented demands on the grid. The future of the power grid depends on accelerating digital innovation and new capabilities," said Massimo Danieli, managing director, business unit grid automation at Hitachi Energy. "As the market leader, we're proud to work closely with our customers and the industry to deliver the advanced solutions that modernise grid infrastructure, enhance resilience, and speed the transition to cleaner energy systems."

Hitachi Energy offers a comprehensive portfolio of grid automation solutions designed to modernise and optimise the electricity grid. The company helps electric utilities worldwide transform the traditional power grid into a more reliable, efficient, and resilient system, capable

of handling the challenges of the evolving energy landscape.

The company's grid automation solutions enable customers to navigate today's energy challenges with a unified, data-driven approach. From planning and building to real-time monitoring, control and protection, as well as maintenance and trading operations, Hitachi Energy's technologies enable safer, more reliable, and sustainable grid performance – connecting customers to what's next across the energy lifecycle.

Published annually since 2021, ARC's Grid Automation Global Market Study combines current market analysis with a five-year market and technology forecast, as well as detailed market share analysis of the world's leading suppliers. The study focuses on electric utilities in the transmission and distribution sector providing power to commercial, industrial, and residential customers. It examines the key hardware, software, and services used to automate the grid – from the central control centers of the grid operators down to the edge of the distribution network.

Pulp machine modernised with customised sealing and bearing solutions

A LEADING South African manufacturer of paper-making equipment sought to modify an existing pulp machine and turned to trusted partner SKF to assist with the redesign of a critical sealing arrangement. With a longstanding track record of successfully using SKF's high-performance bearings, seals and couplings, the customer turned once again to this proven source for an expert, precision-engineered solution.

The application involved a paper/pulp washing and compression box equipped with a rotating internal shower system which is designed to generate internal pressure while also cleaning the machine. A sealing solution was required that is capable of withstanding 1 bar of pressure and that can also offer strong resistance to corrosion.

Collaborating closely with the customer, the SKF team combined their expertise to develop a straightforward,



ward, effective, reliable and easy to implement solution that met all the requirements – a customised sealing arrangement and bearing unit mounted externally on the shower to prevent water leakage during rotation. Nthavela Makondo, application engineer at SKF, explains that in order to accommodate the bearing unit's critical function in facilitating

the shower's rotation, it was essential to customise the sealing arrangement.

"Using the correct seal type and materials were also critical to ensuring an optimum solution, so the sealing arrangement we engineered comprised stainless steel components, locally manufactured seal retainers, O-rings and precision-machined seals," says Makondo. Andre Weyers, seals sales manager at SKF, played a key role in both selecting the appropriate machined seal type and in specifying a self-lubricating material – stainless steel was chosen for its excellent corrosion resistance, especially in wet, chemically aggressive environments – ensuring enhanced performance.

Makondo details the solution further: "We added an O-ring on the side to prevent water from seeping between the tank wall and the seal retainer, which could otherwise damage the welds. The complete sealing

assembly was delivered with a FT 60 TF bearing unit. Our choice of bearing unit size was based on the shaft or shower diameter, along with the load specifications provided by the customer."

The implementation of the tailored sealing arrangement brings a range of significant benefits for the customer. With a factory-greased bearing sealed for life, reliability soars and the machine's lifespan is significantly extended. Furthermore, reduced maintenance means greater uptime, while environmental gains include cutting water use and minimising grease waste.

Having received the go-ahead from the customer at the end of January 2025, the SKF team completed the locally manufactured sealing arrangement within just three weeks. The solution was delivered to the customer's site in March, installed two months later and successfully commissioned on 1

October, demonstrating a seamless integration of teamwork, experience and know-how. "Since the customer needed to integrate our design into their system, they took responsibility for both the installation and commissioning of the machine because it was part of a larger project at the plant," explains Makondo.

SKF's specially designed sealing arrangement, combined with the FT 60 TF bearing unit, provided the optimal solution to combat high-pressure conditions and aggressive corrosion, ensuring the exceptional durability and performance of the pulp machine. Given that the machine has been in operation for over 20 years, modernising its functionality and extending its service life is a proud achievement that not only highlights the SKF team's technical expertise and dedication but also bolsters the machine's continued reliability and efficiency, ensuring it remains a valuable asset.

Revamped high-pressure washers 'race' ahead

WERNER Pumps has launched its fully redesigned range of industrial high-pressure washers, engineered for medium- to heavy-duty applications and built with a 'racing-car' style cart that boosts manoeuvrability, stability and on-site safety.

The expanded line-up includes both electric and petrol variants, with 220V, 380V 3-phase, and petrol engine driven options, delivering 150

to 250 bar of pressure. Every unit now ships standard with a 10 m hose, high-pressure gun, low-water inlet switch, and a thermal-overload trigger stop for operator protection. The new chassis and component layout are designed to be robust and low-maintenance, with a lead time of two weeks from order to delivery.

"Customers told us they wanted a washer that's seriously tough, easy



to move, and effortless to maintain,"

says George Jolly, national sales manager. "So, we re-engineered the platform from the ground up. The new 'racing-car' cart lowers the centre of gravity, protects critical components, and makes hose and gun handling simpler on busy sites."

Suitable for cleaning industrial plant and equipment, including the jetting and vacuum trucks Werner Pumps manufactures and supplies, as well as other industrial cleaning

applications, the revamped range handles persistent grime, oils and debris with consistent output and operator-first safety features.

"Reliability and safety are non-negotiable in our world," says Sebastian Werner, managing director. "We believe the improved range offers a solid range of options that will meet customer needs, and we also see this as a way to extend our reach into new markets."



Energy performance advisory and audit services assist in SA's built environment

BUILDING owners have less than two months to comply with energy performance certificates (EPC) registration as the 7 December 2025 deadline approaches. The regulations, introduced in 2020, make it mandatory to display an Energy Performance Certificate (EPC) in non-residential buildings in South Africa. Non-compliant building owners risk imprisonment, a fine or both.

In July 2025, Deputy Minister of Electricity and Energy, Samantha Graham-Maré, said that over 7,000 public and private buildings have registered for the certificate, while 3,884 EPCs had been issued.

"This is a disappointingly slow start, given the Department of Mineral Resources & Energy's target of reaching 60,000 registrations by the December deadline," says Alison Groves, director, built ecology, WSP in Africa. "It's clear that there's no time to waste and property owners and building managers must act swiftly to ensure they do not contra-

vene legislation."

WSP's advisory and support services are available to help building owners comply with the current EPC registration. "Our experts across sustainability, green building and energy management have worked with several organisations to adopt green building best practices in design and building operations," Groves adds. "This experience puts us in an excellent position to offer advisory guidance to help clients understand what's required to achieve EPC compliance before the December deadline."

Groves says: "Our immediate focus is on evaluating current building performance and advising on steps to improve energy ratings, which is critical for both compliance and long-term sustainability. Given the current levels of EPC compliance, there is a clear need for expert support in navigating regulatory requirements."

As the EPC registration deadline looms, it's important to note that certification is not a once-off exercise. EPCs are valid for five years from date of issue, meaning that building owners will have to undertake a recertification process periodically. To support clients through the certification cycle, WSP is preparing to offer EPC audit services to ensure compliance with SANS1544:2014, alongside review and advisory services focused on ongoing energy performance improvement.

"Our qualified professionals



are ready to support clients through the recertification process," Groves explains. "We anticipate that there will be a growing need for registered EPC Professionals, not only to lead and manage the entire energy performance assessment and issuing of EPCs but to support planning and execution to improve the energy performance of existing buildings and achieve better ratings at recertification."

Level 'A' certification represents the highest possible energy efficiency rating, while Level 'G' indicates the lowest. Although there are no formal penalties for poor performance, publicly displaying a Level 'G' rating could serve as a powerful incentive. Property owners may feel a sense of reputational pressure or embarrassment, which can motivate them to take action – investing in upgrades that improve energy performance and contribute to a more sustainable built environment.

Groves is hopeful that the EPC process could herald the start of a momentum shift in South Africa, where driving sustainability and increased efficiency have been given lip service by many property owners for 'too long'. "The UK has been doing this kind of certification for nearly two decades resulting in a greater awareness of energy efficiency," Groves explains. "In fact, since 2007, it has been a legal requirement to have a valid EPC when selling, renting, or building a property in the UK."

As property owners and managers become aware of their energy usage through the EPC rating they receive, managing all aspects of a building's energy use and finding solutions that maximise efficiency and improve long-term reliability will begin to hold more perceived value.

"Once the initial EPC is issued, we anticipate an increase in property owners setting energy efficiency goals to improve their original building ratings," Groves says.

Heavy lifting equipment runs on polymer bearings

POLYMER technology is increasingly being used in heavy lifting equipment and other industrial machinery where it is replacing steel bearings for strength and durability in a growing range of demanding applications, according to igus.

The world leading polymer bearing manufacturer produces a wide range of polymer bearings that do not require external lubrication and are resistant to corrosion. The company says this makes its polymer bearings ideal for environments where dirt, moisture or abrasive particles can quickly destroy traditional bearings. Manufactured from advanced tribologically-optimised polymers they deliver minimal wear and a long service life even under high loads in applications like lifting.

"In South Africa we found that one of the key advantages of polymer bearings in heavy lifting equipment is their ability to operate reliably in 'dirty' conditions such as timber processing, construction and mining. Sawdust, sand or grit that might cause steel bearings to seize or wear prematurely have little effect on polymer surfaces. This ensures consistent reduced downtime and significantly lower maintenance costs," says igus product manager, Juan-Eric Davidtz.

He adds that the versatility of polymer bearings extends across industries. They combine strength with lightweight design, resist chemicals, dampen vibration and can be tailored for specific load or temperature ranges. Importantly, they last longer than steel bear-

ings in many real-world applications where lubrication is inconsistent or where contaminants are present.

The company suggests the following lifting applications where polymer bearings replace steel for longer life:

- In scissor lifts, where pivot points and joints handle high loads and repeated cycles.
- In forklifts, where steering, mast and lift linkages operate in especially dusty or wet conditions.
- In boom lifts and cherry pickers where articulating joints carry heavy platforms safely.
- In crane booms and hoists which have corrosion-resistant, low-maintenance pivot points.
- In dock levellers where hinges and pivots are exposed to continuous movement and debris.
- In hydraulic lift tables where bushings and pins endure high compression forces.

- In mobile platform lifts where bearings ensure smooth motion in all positions.
- In warehouse stackers where heavy-duty pivot points operate in compact, high-use environments.
- In material handling trolleys where lift mechanisms resist wear from repetitive loads.
- In telehandlers and telescopic lifts where joints and pivots have long-lasting, lubrication-free operation.

"The adoption of polymer bearings in lifting equipment is all about educating engineers and service technicians who are used to using steel bearings and lubrications and are not yet aware of the higher performance abilities of our modern-day polymers. These are often much more durable and efficient and, in some cases, a simple switch to polymer bearings can save compa-



nies hundreds of thousands of Rands in maintenance savings. Wherever we work with companies to find solutions for their lifting equipment challenges we have our customer's designers and operators comment that the machines operate more reliably and require less maintenance in tough industrial environments," concludes Davidtz.

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Analytical and laboratory solutions provider relocates Durban branch

ANTON Paar Southern Africa, the provider of sales, application support and service for the Anton Paar Group's high-precision analytical and laboratory instruments, is relocating its Durban branch.

The company announced that after being based in Sherwood for many years, the Anton Paar Durban team is moving to a new home at Section 1/2 Doncaster Park in Derby Downs Office Park, Westville.

"This move represents much more than a change of address, it marks a new chapter in our continuous journey of growth, innovation, and excellence. Our time in Sherwood has been filled with collaboration, creativity, and

countless achievements. Those walls have witnessed the steady rise of a team committed to precision, passion, and performance — the same values that define Anton Paar worldwide," said Anton Paar Southern Africa MD Jocelyne Abreu.

"As we transition to our new offices in Westville, we carry with us not only our equipment and memories but also our drive to do even better. The new space has been carefully selected to reflect who we are today and where we are headed tomorrow. It's a modern, vibrant environment designed to inspire innovation, foster teamwork, and support the exceptional standards we strive to uphold in every prod-

uct, service, and customer interaction.

"We believe this move embodies our commitment to improvement and growth—creating a great office for great people and great instruments. It's an opportunity to enhance how we work, welcome our partners, and continue delivering solutions that make a measurable difference in laboratories and industries across Southern Africa," she said.

The company thanked its customers, partners, and colleagues for being part of its journey. "We look forward to welcoming you to our new home in Westville, where the next chapter of Anton Paar Southern Africa's Durban team story begins," said Abreu.



Tough hybrid dump trucks for tough conditions

DISA Equipment – exclusive distributors for Tonly in Southern Africa – is launching a new range of Tonly DTH145 hybrid dump trucks, which has been developed to offer more efficient haulage solutions in difficult African conditions, particularly in mining and quarrying.

“Tonly DTH145 hybrid dump trucks, with advanced technology and robust design features, support the global shift towards higher productivity, safer operation and fuel-efficiency,” says Johann Viljoen, national sales manager, DISA Equipment. “DISA Equipment will be hosting demonstrations of these wide-body dump trucks for established fleet owners on local mines early in 2026. This demonstration programme will showcase the unit under tough production conditions, generating performance and cost data before the model is released more widely.

“Our customers want to see how the DTH145

performs on their roads, with their loading equipment and under challenging weather conditions. This is why we are placing units directly onto selected mine sites. Demonstration units will allow operators to assess operating cost per tonne under actual site conditions, comparing hybrid fuel consumption against the diesel haulers already in use. Results are expected to indicate potential reductions in fuel use and lower component wear, supporting both cost control and sustainability targets.

“Our team will provide technical support, parts availability and operator training during the trial period.”

Local mines are required to equip trackless mobile machinery with Level 9 vehicle intervention systems that automatically slow or stop equipment when collision risks are detected. A critical feature of the DTH145's interface is



full compatibility with Level 9 proximity detection systems, allowing easy integration with existing systems in gold, platinum and bulk commodity operations.

DTH145 hybrid dump trucks have ROPS and FOPS certification and a failsafe braking system with fully hydraulic steering, supported by an emergency backup. The payload capacity

is in the 91-ton class, with a 316 kW engine. Other notable features include a rated load capacity of 58 000 kg and a standard bucket capacity of 52 m³.

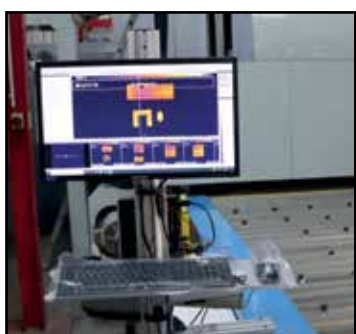
Fuel consumption during controlled test cycles abroad averaged approximately 25 litres per hour, which bodes well for heavy-duty cycles in Africa, ranging from overburden removal to ore haulage on steep gradients.

Advanced features of the DTH145 range will give operators the assurance that these trucks have been engineered for high productivity, greater safety, cost-efficiency and low maintenance requirements. Compliance with current and future safety standards is also critical in the mining sector.

The team offers a technical advisory, repair, maintenance and spare parts service, through a wide network of branches and carefully selected distributors.

Applying infrared solutions in glass manufacturing

IN the glass industry, infrared temperature monitoring is crucial for maintaining product quality and process efficiency. Glass production involves extreme temperatures, from melting raw materials to forming and annealing, where precise temperature control is essential. Instrotech, local representative of Optris, supplies infrared (IR) sensors and cameras which provide non-contact temperature measurements, making them ideal for these high-temperature environments.



Accurate thermal monitoring ensures that the glass is processed within its optimal temperature range, preventing defects such as thermal stress, bubbles, and uneven surfaces. By using IR technology, manufacturers can detect temperature variations in real-time, enabling them to make immediate adjustments and maintain consistency and quality throughout the production cycle.

Enhanced safety is another significant advantage. IR sensors eliminate the need for physical contact with hot glass, reducing the risk of accidents and equipment damage. This non-contact capability also minimises maintenance needs for temperature sensors exposed to harsh conditions.

Furthermore, IR temperature monitoring improves process efficiency. It allows for precise control of melting furnaces, annealing lehrs, and forming equipment, optimising energy consumption and reducing waste. Overall, integrating infrared temperature monitoring into glass manufacturing processes ensures the production of high-quality products, operational safety, and cost-effective production.

CHALLENGES

Infrared (IR) non-contact temperature measurement presents specific challenges in the glass industry. High ambient temperatures in glass production environments, such as melting furnaces and forming stations, can impact the accuracy of IR sensors. These sensors require precise calibration to account for thermal interference and ensure measurement reliability. Additionally, the reflective nature of molten glass complicates temperature readings, as varying emissivity can

lead to measurement inaccuracies. Adjusting the emissivity settings on IR devices is crucial but can be complex and time-consuming.

Dust and smoke generated during glass processing can obstruct IR measurements. These particulates can affect the clarity of thermal

images and readings, requiring frequent maintenance and cleaning of IR equipment. Moreover, temperature gradients within the glass during processes like annealing can pose challenges. IR cameras must be configured to handle these variations effectively, ensuring accurate monitoring across different zones of the production process.

BENEFITS

Despite the challenges, IR non-contact temperature measurement offers substantial benefits for the glass industry. Precision in high-temperature environments is a significant advantage. IR sensors can accurately measure temperatures without physical contact, crucial for monitoring molten glass and high-heat applications where traditional sensors are unsuitable. This precision enables the achievement of optimal thermal conditions necessary for producing high-quality glass.

Real-time monitoring provided by IR technology enables immediate adjustments to be made during the production process. This capability is vital for maintaining consistent glass quality and preventing defects such as thermal stress or uneven surfaces. Real-time data enables dynamic control of melting, forming, and annealing processes, thereby optimising overall production efficiency.

Enhanced safety is another key benefit. Non-contact measurement reduces the risk associated with handling extremely hot materials, thereby improving safety for operators and reducing equipment wear and tear. This safety enhancement contributes to a safer work environment and lower maintenance costs for temperature measurement systems.

Applications and Efficiency Gains

Infrared non-contact temperature measurement significantly enhances efficiency across

various glass industry applications. In melting furnaces, IR sensors provide accurate temperature readings to control the molten glass temperature, ensuring proper material properties and reducing energy consumption. For forming processes, IR cameras monitor temperature

variations to optimise mould heating and cooling, enhancing product consistency and reducing defects.

During annealing, IR technology helps in managing the temperature profiles of glass as it cools.

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Shifting the electrification and automation sectors towards a net-zero future

ABB's is implementing a strategic initiative aimed at achieving a sustainable future characterised by zero emissions, zero accidents, and zero waste. "This mission reflects ABB's commitment to environmental stewardship and social responsibility, aligning with global sustainability goals," comments Bradley James (**pictured**), Product Marketing Director Electrification Distribution Solutions (ELDS) South Africa.

By combining energy management systems with electrification and renewable resource technologies, ABB established the trade-marked Mission to Zero programme. Acting as a guiding light, ABB aims to reach net zero by 2030 at its own factory sites, while also helping customers and suppliers achieve their emission reduction ambitions.

In terms of zero emissions, ABB is dedicated to reducing its carbon footprint and facilitating the transition to sustainable energy solutions. This includes the development of technologies that enhance energy efficiency and promote the use of renewable energy sources, helping customers and industries lower their greenhouse gas emissions.

By choosing the right applications in concert with the designed energy architecture, customers can benefit from reduced CO₂ emissions, energy savings, reduced energy loss, as well as cost savings, while fulfilling the requirements of environmental product declarations (EPD) or certificates on their path toward carbon neutrality.

In terms of South Africa specifically, ABB's Mission to Zero efforts include local manufacturing of Compact Secondary Substations

(CSS) and promoting its new SF₆-Free gas switchgear. The Mission to Zero blueprint is being successfully applied to other ABB factories, such as ABB's circuit breaker and switchgear factory in Dalmine, Italy.

Here, Mission to Zero efforts have aimed to reduce CO₂ and other greenhouse gas (GHG) emissions, conserve resources and increase visibility and insights into their own energy management. To promote circularity and resource conservation, ABB also evaluated and certified products and processes using life cycle assessments (LCA) and EPD.

By installing photovoltaics (PV) for power generation and consumption, coupled with smart energy and asset management technology to monitor and assess power use, this ABB factory has been able to generate over 20% of its own energy in the summer months. It has reduced CO₂ emissions by over 2,200 tons over the past two years.

ABB is committed to minimising waste throughout its operations by promoting circular economy principles. This involves reducing material consumption, enhancing recycling efforts and finding innovative ways to reuse resources, thereby minimising environmental impact. Through Mission to Zero, ABB aims to lead by example in the electrification and automation sectors, driving innovation that contributes to a sustainable and responsible future for all.

"Currently, what we are witnessing is a lack of available power for our country as a whole,



forcing our utility to implement loadshedding and load reduction. Our business pushes our manufacturing facilities to utilise less power while respecting our environment and executing it safely. This promotes development and innovation in ABB to be more creative in generating, storing, and utilising the power in a more efficient manner, therefore putting less reliance and stress on our electricity grid," says James.

He points to the Energy Efficiency Movement (EEM), a global initiative that aims to accelerate the adoption of energy efficiency solutions within industries to achieve net-zero emissions. It provides a platform for stakeholders to share knowledge, collaborate and develop innovative energy-saving strategies. "Local companies can get involved by joining the EEM, participating in events, implementing energy audits, upgrading to energy-efficient equipment, and engaging employees in energy-saving practices," explains James.

With ongoing energy challenges, ABB's solutions such as microgrids, energy storage, and smart power management enable local businesses and municipalities to optimise energy use, integrate renewables, and enhance energy security. For example, ABB integrates renewable energy into operations through a combination of advanced technologies, digital solutions, and system-level expertise that enable the seamless, efficient, and reliable use of clean energy sources.

For any operation to become a Mission to Zero site, it must achieve certain minimum

requirements, apply ABB solutions and integrate third-party solutions to enable greater electrification, efficiency and use of renewable energy. There are four pillars of the transition, namely planning, innovation, monitoring and sustainability.

James adds that ABB aligns strongly with South Africa's Just Energy Transition (JET) objectives through its technologies, services and sustainability commitments that directly support decarbonisation, energy security and inclusive socioeconomic development. ABB contributes to the JET vision by decarbonising the power sector, enabling clean technology industries, and supporting energy security and resilience.

"ABB can play a pivotal role in supporting South Africa's net-zero and climate goals through its advanced technologies, deep local presence, and global expertise in enabling clean, efficient and resilient energy systems," says James. It can accelerate renewable energy integration, promote energy efficiency and support grid modernisation and resilience.

Here, digital technology plays a key role in energy management. "At ABB, we believe digitalisation is key to unlocking a low-carbon future," notes James. Its digital technologies give customers the visibility, intelligence, and control they need to manage energy more sustainably, transforming ambition into action on the path to net zero.

Therefore, digital technology is a game-changer in energy management, as with ABB's SSC600 SW, the first virtualised protection and control solution with Smart Substation Control and Protection.

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Food-safe environments don't just 'sparkle'

THE rising number of food-borne illnesses in South Africa, particularly among children, has led to hospitalisations and tragic fatalities, leaving families devastated and communities concerned. These cases have made headlines across the country, with investigations pointing to possible food contamination and periodically reigniting national conversations about food safety.

It's a stark reminder of how high the stakes are when hygiene fails.

Jeffrey Madkins, marketing manager for Unilever Professional, explains, "In many businesses, visual cleanliness is prioritised, and hygiene protocols often rely on surface-level inspections and routine tasks – if it looks clean, it must be clean. But hygiene goes far beyond what the eye can see," he cautions.

For South Africa's food industry, this carries particular weight. Cross-contamination, poor storage practices, and undetected temperature changes are often invisible risks that surface only when it's too late.

Beyond the ethical responsibility, there's also a legal duty of care – and it doesn't lie with inspectors or cleaners; it rests squarely with the employer.

Under the Occupational Health and Safety Act (Act 85 of 1993) and the Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972):

- Food must be handled and stored in safe, hygienic conditions.
- Businesses must ensure their premises are clean and free from risk.
- Staff must be properly trained in hygiene

practices, and supervision must be in place.

People and profit typically dominate business discussions. Hygiene rarely makes it onto the agenda. "But it should," Madkins notes. "Because one lapse can quickly turn into a major crisis that affects both."

He points to some high-stakes vulnerabilities that, if left unchecked, can escalate into serious business consequences. But the greatest cost is one no business wants to carry – the loss of life or public trust.

What businesses can do

The good news is that many of the most serious risks can be prevented with the right systems in place. Madkins recommends some practical steps to help food industry businesses mitigate hygiene risks:

- Audit, act, repeat. Don't wait for an inspection – make hygiene audits routine, not reactive. Spot gaps early and address them promptly.
- Train, train and train some more. Ensure every person who handles food is trained on, and understands safe storage, cross-contamination risks, and personal and environmental hygiene protocols. Consistent refresher training will help to reinforce safe practices, prevent complacency, and ensure hygiene remains a daily priority.
- Store smartly. Food should be stored away from cleaning products, cold chains must be maintained, and raw and cooked items handled separately.
- Records matter. If it's not documented, it didn't happen.



Online portal provides real-time maintenance data

KONECRANES newly launched The Konecranes Portal, takes online communications to the next level through its single point of access to the company's digital customer platforms. The portal lets customers quickly and easily see their crane maintenance information, asset condition and usage data from quotations and agreement details to the Truconnect suite of offerings.

"Konecranes has always been at the forefront in the development and implementation of online customer and client interactive platforms as we believe it is the quickest and most interactive way to communicate with our customer base and technicians," said Ian Grobler, sales manager for Konecranes South Africa.

The Konecranes Portal has been developed to provide information that's required for customers to make informed maintenance decisions. When a customer's equipment is serviced, Konecranes uses the Risk and Recommendation Method to document component exceptions, assess and prioritise risks and provide recommendations to improve safety and productivity. Konecranes Technicians load the acquired information to their mobile devices during the service visit, giving the customer quick access to their service report on the portal.

"As a registered user, one is able to browse and order spare parts, manuals or accessories for many brands, makes and models of industrial cranes and hoists, making the process simplified and all-embracing to customer needs," said Grobler.

The portal also displays data from customers' assets with Truconnect remote monitoring in real-time. Safety and Production risks are colour coded and component condition is shown in easy to read graphs.



DATA SUPPORTS KNOWLEDGE

Digital services data on The Konecranes Portal enables data-driven maintenance that can help customers optimise crane performance and reduce downtime.

The Konecranes Portal offers users the option to browse the company's store for spare parts, manuals and accessories for all lifting equipment and components irrespective of the brand. From the Store page, users can browse the company's offering by product categories and quick links, or they can use suggestive search to find what they are looking for.

Under parts and manuals, the equipment model can be used to browse an archive of generic product manuals and spare part catalogues.

The slings and inspection facility has been designed to inspect non-maintainable load lifting attachments and accessories that are attached to the crane hook during operation. The inspection identifies deficiencies and deviations from local statutory safety and health regulations. The inspection service utilises radio frequency identification (RFID) tags to help quickly and reliably identify attachments and a smartphone app to record load lifting attachment inspection data.

Information on the portal keeps track of inventory, executes audits and plans for replacements. The fleet view shows all recorded loose lifting devices for the selected location. By default, the devices in this list are sorted after the next due inspection. Devices that are not inspected yet or are past due should be taken out of service without delay and should be inspected as soon as possible to avoid a safety risk, Konecranes advises.

Truconnect is a suite of remote service products and applications that support maintenance operations and drive improvements in safety and performance through the analysis and identifying of anomalies, patterns and trends. The Konecranes Portal opens up access to Truconnect remote monitoring, brake monitoring and wire rope monitoring options.

All Konecranes technicians utilise slim devices for the uploading of inspection, servicing and repair data to The Konecranes Portal, making the availability of data and records instantaneous. This assists with customer costing and budgetary functions as well as the supply of lifting equipment performance data.

Grobler added, "Measurement of usage, performance, malfunction, wear and tear is compromised without the relevant data. The Konecranes Portal delivers this pertinent data. We believe the ability to communicate the required data, in real time, is a key factor in ensuring that a partnership is developed between Konecranes and their customers.

"Without measurement there is no data and without data there is no indication of performance and condition. Data is now a critical element to lifting equipment performance and lifespan. One could say The Konecranes Portal is a data-full resource, essential to both our customers and technicians," concluded Grobler.

Pump manufacturer helps to solves wastewater challenges

KSB Pumps and Valves is doubling its efforts to help government, including local municipalities, find practical and technical solutions to the growing wastewater challenges gripping large parts of the country.

As part of a vast global company, the local operation is calling on its far-reaching skills base to work with local wastewater service providers in finding innovative solutions for projects of all sizes, from national to municipal and even smaller case-by-case mini projects.

"We understand the challenges our municipalities face and as a result we are bringing all our expertise locally as well as internationally to the table to allow us to assist wherever there are wastewater projects no matter the size or complexity – from small schools to large industrial areas and entire cities," says KSB Pumps and Valves market area manager for water (wastewater and irrigation), Hugo du Plessis.

"As a result of challenges at grassroots level we have even identified a strong need for an upgrade of one of our products from our wastewater portfolio and are almost ready to introduce this new locally developed wastewater pump that will be revealed to the market in the next month or two and will be a game-changer for wastewater plants.

"These types of innovations, combined with



advanced technical services and a wide array of products is part of our renewed drive to help address wastewater issues in conjunction with municipalities in the country. We also remain mindful of budgetary constraints and have worked within these limits to provide products and services that are cost-effective, versatile and reliable.

"At the same time, we have sourced other suitable solutions from across the globe that have been added to our local arsenal. Now,

our next step is to work with consulting engineers and end-users from various regions from the inception of their projects to ensure pump stations and treatment plants are designed to work effectively for at least the next 20-30 years," says Du Plessis.

KSB Pumps and Valves is in a strong position to provide expertise for all aspects of wastewater handling from physical requirement to suction conditions in pump stations and specialised equipment in treatment plants to submersible pumps, mixers and flow makers. The company has uniquely tailored solutions across every stage of the wastewater process with its extensive range of products that adhere to strict global standards for quality, efficiency and longevity.

"Our commitment extends beyond merely selling products. We work with government agencies, municipalities and engineers to provide trusted technical consultation, training and collaboration to ensure projects succeed. We will also be launching a series of new products that are designed and manufactured locally for local conditions, as well as providing products from our KSB global operations that are suitable for local conditions. These bring fast solutions to the country's wastewater needs and will be introduced over the coming months," Du Plessis concludes.

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29 November 2025

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- Motors, Drives & Transmissions
- Security
- Transport & Logistics
- Technology

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- Materials Handling & Logistics
- Plastics & Rubber
- SHEQ Management
- Renewable Energy

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Fire-rated 2-hour prefabricated steel stores a turnkey solution

SPILL Doctor specialises in providing innovative, tailored solutions to meet the unique needs of each project. The company's 2-hour fire-rated prefabricated steel stores are a perfect example of this approach. Designed to offer safety, flexibility, and cost efficiency, these stores provide a superior alternative to traditional warehouse construction, often at just a third of the price, according to the company.

"Every 2-hour fire-rated steel store we produce is custom-engineered to suit the specific requirements of our clients. Our in-house design team works closely with clients to assess their needs, considering the types of materials being stored, safety regulations, and the spatial constraints of the site. Once the design is finalised, we handle all aspects of the process, ensuring that the store is not only functional but also adheres to

the highest standards of engineering and safety," says Kevin Murphy, MD Spill Doctor.

The durability of Spill Doctor's prefabricated steel stores is rooted in its meticulous design and high-quality construction. The stores are made using tested fire-rated panels, offering two hours of protection against intense heat. This feature is critical, and legally required, for minimising risks in the event of a fire and providing a safer working environment for employees.

One of the most significant advantages of the company's prefabricated steel stores is their adaptability. "Unlike permanent warehouse structures, these units can be relocated as your business evolves. However, if you wish to relocate a store then permission from the relevant authorities needs to be resubmitted. Whether you need to move the store to a



different part of your facility or even to a new site, the modular design makes relocation quick and hassle-free. This adaptability ensures that your investment remains valuable even as your storage requirements change," says Murphy.

Additionally, Spill Doctor's steel stores cost only a fraction of what it would take to construct a full-scale warehouse. Without compromising on safety or functionality, these pre-

fabricated solutions allow companies to allocate resources more efficiently, saving both time and money.

Spill Doctor prides itself on offering a turnkey solution. From concept to installation, it handles every detail to deliver a seamless experience.

1. Design and engineering. The company creates professional, compliant designs tailored to the client's project.
2. Approvals and compliance. The Spill Doctor team secures the necessary permits from local municipalities, including environmental, planning, and local fire department approvals.
3. Delivery and installation. The store is delivered and installed efficiently, enabling clients to focus on their operations without delays.

"By managing the entire process, we eliminate the stress of coordinating with multiple vendors and authorities, ensuring that your storage solution is implemented quickly and effectively," says Murphy.

"When compared to standard steel stores or traditional warehouse construction, our prefabricated fire-rated steel stores stand out for their advanced engineering and innovative features. These stores provide the highest level of safety, efficiency and cost-effectiveness while meeting all local and international compliance standards.

"With Spill Doctor's 2-hour fire-rated steel stores, you're not just investing in a product—you're choosing a partner dedicated to safety and innovation. We help companies create a safer, more adaptable storage solution for their business," says Murphy.

Circuit breakers for reliable, compliant protection

LEGRAND'S low-voltage power distribution portfolio encompasses the DX³ range of miniature circuit breakers, designed to deliver dependable protection in residential, commercial and industrial installations. The range covers ratings from 1 A to 125 A, with breaking capacities up to 50 kA, making this system suitable for installations where performance and safety compliance are essential.

The DX³ range provides a wide selection of tripping curves – from B and C types for resistive and general-purpose loads, to D and Z types for inductive or sensitive equipment. This flexibility allows installers and designers to match breaker characteristics precisely to system requirements, improving selectivity and operational reliability. These

devices combine thermal and magnetic trip mechanisms: the thermal element ensures reliable response to prolonged overloads, while the magnetic element provides instantaneous disconnection in the event of a short-circuit.

According to Legrand specialists, "As electrical installations advance to include more sensitive equipment and higher energy densities, it is increasingly important that protection devices meet stringent standards and are easy to specify and install. DX³ circuit breakers are engineered to safely handle high fault levels and to perform consistently in both AC and DC systems. This range, with rated operational voltages up to 230/400 V AC and dedicated DC configurations for solar and battery applications, offers safety compli-



ance and long-term reliability.

"Installers value many features of the DX³ range, including those that enhance safe operation. Wide connection reinforced terminals with compensating clamps reduce the risk of overheating from loose connections and retractable insulating shields are designed to prevent accidental contact. Clear contact position indicators, secure label holders and full compatibility with auxiliaries allow quick installation and uncom-

plicated integration into distribution boards and energy management systems. Typical applications are in data centres, commercial buildings and renewable energy systems."

The range is also classified for high current-limiting performance. By interrupting fault currents before they reach their peak value, these breakers significantly reduce the thermal and mechanical stresses imposed on conductors and connected equipment. This critical feature not only protects downstream devices but also extends the service life of the overall installation.

DX³ circuit breakers are compliant with IEC 60898-1 and IEC 60947-2 specifications and are suitable for use in environments from residential distribution boards to industrial

panels requiring higher short-circuit capacities. These devices have insulation voltages up to 500 V and are tested to stringent endurance requirements, ensuring reliable performance throughout their service life.

Legrand's DX³ circuit breakers are available in single to four-pole versions and can be installed in both alternating and direct current systems. The design also facilitates multipole series connection for higher DC voltages, which is an important consideration in photovoltaic and battery storage applications.

By combining robust electrical performance with advanced technology and practical design features, the DX³ range ensures safer, more efficient power distribution in diverse installations.

Collaboration pushes the boundaries of dry-type transformer technology

AS demand grows for safer, more reliable and environmentally responsible power infrastructure, dry-type transformer technology is gaining ground globally – and leading the charge in Africa is Trafo Power Solutions, in partnership with renowned Italian manufacturer TMC Transformers.

This dynamic collaboration, now in its seventh year, continues to push the boundaries of dry-type transformer design and application. According to Trafo Power Solutions Managing Director David Claassen, the company has played a pivotal role in introducing this technology to a wide range of industries across Africa, from mining and manufacturing to renewable energy and infrastructure.

"Our work with TMC Transformers

enables us to deliver custom engineered dry-type transformer solutions that meet even the most demanding specifications," says Claassen. "Our success lies in a shared culture of innovation, agility and technical excellence."

TMC Transformers Sales Director Andrea Ghidini explains that the company is known for tackling complex challenges with highly specialised solutions. "We are often approached for non-standard applications, such as transformers with ratings up to 25 MVA or primary windings at 50 kV, or units handling extreme harmonic distortion or secondary currents of up to 30,000 amps," he says.

In African mining operations – one of Trafo Power Solutions' primary markets – the challenges extend



beyond electrical performance. Transformers must be robust enough to endure long and difficult transport routes, severe vibration, high dust levels and extreme temperatures.

"Dry-type technology is ideal in these environments, especially as safety and environmental concerns grow," Claassen notes. "Unlike oil-

filled transformers, dry-type units are air-cooled and present minimal fire risk, making them suitable for installation near operational areas and personnel."

Once confined to indoor use, dry-type transformers are now widely used in outdoor applications thanks to technological advancements. Higher protection ratings and improved cooling options, including forced-air, air-to-water and direct or indirect water cooling, allow these units to operate reliably even in Africa's toughest climates.

The partnership is founded on a shared commitment to engineering precision. TMC uses advanced simulation tools, including finite element analysis and thermo-dynamic mod-

elling, to verify every design before production. This ensures optimal performance, long-term reliability and reduced operational risk.

"Rather than just meeting the brief, we interrogate every application to offer smarter alternatives or highlight potential issues," says Ghidini. "That is the value of custom engineering."

Claassen adds that customers benefit from this depth of expertise: "We don't just sell transformers – we deliver engineered power solutions that support long-term operational success."

With this collaboration, Trafo Power Solutions and TMC Transformers continue to redefine what is possible in dry-type transformer technology – setting new benchmarks for innovation, safety and performance across the continent.