

EASTERN CAPE INDUSTRIAL & BUSINESS

YOUR LINK TO INDUSTRY THROUGHOUT THE EASTERN CAPE

Connect with us on :  

NEWS[®]
ISSN NO: 1996-9708

SEPTEMBER / OCTOBER 2023

R17,10 (VAT incl.)

ISSUE NO: 117

Work, wonderful work!

THE Coega Development Corporation added a remarkable 15,222 jobs between April 2022 and March 2023. The organisation is certainly delivering on its vision to be a catalyst for socio-economic development.

The 15,222 total jobs created comprise 5,844 construction jobs and 9,378 accumulative operational jobs in the Coega Special Economic Zone (SEZ).

Part of Coega's job creation success can be ascribed to the development corporation's ability to attract sustainable investments in the SEZ, and the growth of its reputation as a trusted infrastructure implementing agent of choice in the country and beyond its borders through the Coega Africa Programme (CAP).

The country currently faces a 32.6% unemployment rate, according to Stats SA. Empirical studies have shown that economic growth tends to be positively associated with job creation. But, with national growth rates ranging between -1,1% and 1,8% over the four quarters from April 2022 and March 2023., sluggish national economic growth is not sufficient. Interestingly, Stats SA's experimental provincial GDP estimates released on September 26 indicate that only Gauteng (2,8%), the Western Cape (2,6%) and the Eastern Cape (2,1%) experienced economic growth rates higher than the national average (1,9%) in 2022.

Head of Coega's human capital solutions unit, Craig Luckman says the reasons behind the remarkable job creation achievement are both the economic environment and a focus on training and skills development – and that the two are not mutually exclusive when enhancing job creation.



"The majority of the reported jobs created, emanate from business entities that have established operations within the Coega Special Economic Zone and the Nelson Mandela Bay Logistics Park. These are primarily in the manufacturing, processing and services sectors. Coega favours targeted industries with higher levels of job creation. The establishment and maintenance of a conducive operational environment, with enhanced support services provided by Coega, serves to be the catalyst for ongoing expansions amongst the operational investors, with the resultant continued growth in job creation," Luckman says.

Coega's approach to job creation

is rooted in its dedication to skills development and comprehensive training programmes that are offered to communities, and a special focus on youth, women, and persons with disabilities.

"Coega also facilitates technical skills training through the Coega Skills Development Centre, with focussed training aligned to industry requirements to enhance the probability of beneficiaries and trainees acquiring meaningful employment after such training. Skills development funding remains an ongoing challenge, as Coega mostly relies on limited funding support from the various Sector Education and Training Authorities (SETAs) to enable such

skills training. Technical skills training is expensive and acquiring sufficient funding for skills development is an ongoing challenge," Luckman says.

Excluding the R3 billion Stellantis investment, Coegasecured four investors, with a combined investment value of over R385.2 million in the first quarter of this financial year 2023/24, and seeks to build upon its achievements by attracting further investment, expanding its infrastructure portfolios, and diversifying its economic base. By placing emphasis on emerging sectors such as renewable energy, agro-processing, and information technology, Luckman says that the jobs report-

ed on are across all levels of employment, with the majority as with most organisations being at the lower to mid-level.

Of the 9,378 accumulative operational jobs created, more than half (53%) are either in the agro-processing (28%) or automotive (25%) sectors. Logistics accounts for 17% and BPO 16%. The other sector above 5% is metals at 6%. Chemicals accounts for 3% and the construction sector 2%. On their own, light manufacturing, energy, manufacturing and mining sectors account for less than 2% of the new jobs created.

Luckman says that the Eastern Cape experiences the effects of urbanisation from the eastern part of the Eastern Cape, but not to the extent of Cape Town and Gauteng. With regards to skills migrating out of the province, he says, "local semi-skilled and skilled employees tend to remain locally except artisans in the oil and gas shutdown maintenance space and bulk liquid tank fabrication. Special steels welders and grinders are very mobile and follow projects. Skills retention is also ensured through competitive remuneration and large projects at Coega attract job seekers at all skill levels."

To achieve its objectives, Coega acknowledges the paramount significance of collaboration and partnerships. By nurturing relationships with local and international investors, industry stakeholders, and government entities, Coega harnesses collective expertise, resources, and market opportunities. Furthermore, Coega remains unwavering in its commitment to maintaining a transparent and investor-friendly environment, ensuring a conducive business climate that attracts both domestic and foreign investments.

Bulk water storage supplements NMBM supply

THE Nelson Mandela Bay Metropolitan Municipality has been experiencing water challenges for several years. As part of one of nine initiatives implemented by the municipality, a 460,000 litre bulk water storage tank from SBS Tanks was installed.

"Lack of rain in the catchment areas has meant that the Nelson Mandela Bay Metropolitan Municipality has had to come up with solutions to improve the sustainability of the water supply, and keep water flowing to businesses and residents," said director at SBS Tanks, Mava Gwagwa.

"One of the initiatives was to develop a well-field along the western outskirts of Gqeberha,

which included a bulk water storage tank."

In the Bushy Park area, several boreholes were sited, drilled, tested and equipped with pumps. The water from these boreholes feeds collectively into a single 460,000 litre SBS Tank. The tank, along with a booster pump station, is located next to the main bulk supply lines serving the metro from the west. Potable water from the water storage tank is then pumped into the main supply, supplementing the water supply to the Metro.

"The site posed many challenges. These included difficult sand road access to the site, large and specialised pipework and nozzle requirements," Gwagwa said.

"This is exactly why the company has an in-house engineering team that can work with consulting engineers, municipalities and other professionals to ensure a successful project outcome."

The modular and lightweight panel construction of water storage tanks from SBS makes it possible to access remote sites with terrain challenges, such as the site at Bushy Park. By collaborating with the main contractor and consulting engineer on this project, SBS was able to successfully supply and install a sustainable and practical storage solution for the project and the overall water supply scheme.



INSIDE



R3bn investment will establish a state-of-the-art auto plant in Coega- page 3



Motors, Drives & Transmissions - page 5

Metals, Fabrication & Machine Tools - page 7



Disaster Management, Health & Safety - page 8

Pumps, Valves, Pipes & Fittings - page 9



Company & Product News - page 12



Government says it's prioritising investment in infrastructure for economic growth

In his keynote address at the opening of the 9th UNESCO Africa Engineering Week (AEW) and the 7th Africa Engineering Conference, Deputy President Paul Mashatile (pictured) stated, "Investing in world-class infrastructure contributes significantly to improving the quality of lives of citizens, as well as the competitiveness and attractiveness of countries, regions and cities."

In his keynote address at the conference, attended by dignitaries from across the African continent, the Deputy President went on to state that: "Engineering is the backbone of any society and plays a role in shaping the world driving technological advancements, infrastructure development and economic progress."

"Today, African engineers play a crucial role in shaping our future. They are at the forefront of ground-breaking projects addressing pressing challenges in energy, water, transportation, freight and logistics, and also in the communication sector."

"It is therefore essential to bridge the gaps in our education system, promote research and development and foster an environment that enables inclusivity and professional growth. We must inspire and empower the next generation of engineers by instilling a passion for science, technology, engineering, and mathematics (STEM) in our youth. Together, we can pave the way for a future where engineering is central to Africa's growth and prosperity."

Speaking prior to the Deputy President, Minister of Public Works and Infrastructure, Sihle Zikalala, stated, "We call on everyone including the private sector to join government in investing in the development of engineering professionals for the built environment sector to function effectively by enhancing collaboration between academia, industry, the private sector and government." He emphasised that engineers must not consider themselves as pure technicians with no role in policy making. "We must collaborate and your practical knowledge must inform the policy direction for our country to succeed," he said.

Refilwe Buthelezi, the President of the Engineering Council of South Africa (ECSA) in her welcome conference opening address stated that the 9th UNESCO Africa Engineering Week and 7th Africa Engineering Conference is a convergence of like-minded individuals from different spheres coming together to transform the sector through an orchestrated researched effort, that prioritizes infrastructure development.

She added: "The African continent is undergoing a transition period, a period where we need to focus on rapid transformation and economic growth. This event aims to increase the visibility of engineering in South Africa, but also within the continent and the role that we play in creating a sustainable future. We are calling for more collaboration in growing the



engineering pipeline. And this we believe, can be done by focusing more on basic education. STEM education is essential for Africa's future development as it produces students with the skills and knowledge they need to solve some of the complex problems that we are facing on a day-to-day basis." She concluded by stating that we need to find ways to build the Africa that we want.

In his address, Martiale Zebaze Kana, UNESCO Regional Director, said: "Since inception, nine years ago, Africa Engineering Week has grown, evolved and taken on a new board, bringing engineers and stakeholders from Africa and beyond to engage in discourse, collaborate and work together on solving the challenges of our continent. No one institution or individual country can achieve sustainable

development on its own - collaboration and partnerships and access to reliable data are key."

Martin Manuhwa, Conference Chair and FAEO Past President Southern Africa, in his address, appealed to the Honourable Minister, the Honourable Deputy President and all the policymakers present, to ensure that the engineering field is supported by capacity building, is properly regulated, and that only competent qualified professionals are allowed to practice engineering. He also requested that government make skills development a priority.

The aim of UNESCO's AEW and Africa Engineering Conference is to honour, inspire, and cultivate engineering excellence across Africa. It serves as a platform to educate and enthuse the youth and the public about the fascinating world of engineering, emphasizing its role in addressing the pressing challenges faced in the region.

The 9th UNESCO AEW and the 7th Africa Engineering Conference takes place at the CSIR International Convention Centre in Pretoria, South Africa, from 25-28 September 2023.

This year's conference continued to focus on critical issues impacting women in engineering, students and young professionals, business to business networking and technical paper sessions - with each running a dedicated programme for the duration of the event.

East London port terminal exports its first shipment of soya beans

THE East London port terminal handled its first soya beans export vessel in September when St Columbia started loading 30,000 tons destined for Malaysia. Terminal performance saw an average of 207 tons per hour against a target of 90 tons per hour, with minimal interruptions over the planned six days of loading.

The terminal's agricultural volumes continue to increase this year after nearly two years of the grain elevator's temporary closure due to a severe decline in agricultural bulk volumes regionally. Terminal manager Naliya Stamper said, "While we started with maize and wheat vessels early on in the year, it's a big achievement for us to handle soya bean exports as they have not previously formed part of our agricultural exports". She added that the terminal had collaborated with industry, and local and regional stakeholders to unlock further economic opportunities for the Eastern Cape region.



The grain elevator which is also one of the largest silos in the country, with a capacity of 66,000 tons became financially constrained and a decision was taken to temporarily close the facility until business opportunities opened in the market. The terminal did however continue to discharge grain using a direct discharge operating model, where cargo is loaded in trucks and taken to an external

facility. "The export of the first consignment of soya beans in the Eastern Cape is a true milestone and we are growing from strength to strength with each passing month, as we aim to return to what we are known for globally," said Stamper. She added that only one trial of soya beans export was ever done at the terminal in the early eighties, and it was unsuccessful.

South Africa has in the recent past increased its production with the introduction of policies to attract new seed technology for soya beans, further attracting investment. According to Grain South Africa, the breeding and technology levy was introduced into the market to incentivise the development of new cultivars and technology. Yield increases are expected as new cultivars will be more adapted to local growing conditions and with producers' knowledge in terms of local production practices also improving.

Flooring specialists to be acquired

A LEADING South African manufacturer of specialist epoxy, polyurethane flooring and construction solutions, Technical Finishes SA (TFSA), and a world leader in light and sustainable construction, Saint-Gobain Construction Products South Africa (SGCP), have entered into an agreement whereby SGCP wishes to acquire TFSA.

These two highly complementary businesses have a shared vision to deliver quality products, exceptional service and sustainable solutions to both the specialist flooring and general construction industries in South Africa.

Pending regulatory approval, the agreement would see SGCP acquiring 100% of the shares of the target company, TFSA in South Africa. Until such time, both companies will continue to drive business as usual.

EASTERN CAPE INDUSTRIAL & BUSINESS NEWS
YOUR LINK TO INDUSTRY THROUGHOUT THE EASTERN CAPE

Tel: 0861 122 441

P O Box 1322 Wandsbeck 3631
Fax: (031) 266 7514
Email: admin@mediaevents.co.za
www.mediaevents.co.za

Managing Director: Janet Coom

Editor: Maggie Wittstock
Email: editorial@mediaevents.co.za

Sales & Marketing Manager:
Cheryl Armitage
Email: cheryl@mediaevents.co.za

Any news items, press releases, articles and photographs relating to business and industry in Eastern Cape Industrial & Business News are welcome. All contributions will be considered for publication.

Disclaimer:

The editor and management of Eastern Cape Industrial & Business News make every effort to ensure the accuracy of the contents of this publication.

However, no warranty is made and no responsibility will be borne by the editor or management of consequences of any actions based on information published. The views and opinions expressed in this publication do not necessarily reflect those of the editor and/or management.

PUBLISHED BY: Hentiq 1910 (Pty) Ltd
t/a THE MEDIA & EVENTS CO
Reg No. 1999/019445/07
COPYRIGHT: All rights reserved



Electricity wheeling comes online in Cape Town

THE City of Cape Town successfully wheeled solar power from one of Growthpoint's shopping centres, The Constantia Village, to another one of the property company's office buildings in the Foreshore on September 10.

Redefine Properties is also participating in the City's electricity wheeling pilot project and is undertaking a 5.5 MW solar wheeling project on the roof of its wholly-owned Massmart distribution centre at Brackengate 2.

A wheeling agreement between the City and Growthpoint was signed at the end of August and Etana has acted as the energy trader.

The City of Cape Town's six-month pilot project includes 15 wheeling participants representing 25 generators and 40 customers. The pilot will lay the groundwork for future wheeling in Cape Town and enable businesses to use energy from rooftop solar panels across multiple locations, encouraging them to optimise solar capacity instead of limiting it to individual building use.

"Overall, Cape Town is planning to add up to one gigawatt of independent power to end loadshedding in the city over time. The exact mix may vary, but we expect wheeling to contribute up to 350MW to the grid in time. Congratulations to the pioneering private sector players who successfully wheeled the very first electrons, and thanks to the City's team who worked to get the enabling legislation, billing engine, and wheeling agreements in place. This is good news for the economy and the coming energy transition, which Cape Town is proud to be at the forefront of," said Mayor Geordin Hill-Lewis.



SA CEO of Growthpoint Properties, Estienne de Klerk, says, "This project brings Growthpoint closer to our climate commitment of being carbon neutral by 2050 and is the starting point to providing clean green energy to our tenants in Cape Town to further their environmental commitments."

Director of Etana Energy, Reyburn Hendricks, comments, "We are incredibly excited about this landmark initiative. Allowing the wheeling of electricity to municipal connected customers will accelerate Etana's mission of bringing much-needed new renewable energy generation onto the grid in South Africa."

Cape Town's "end loadshedding" plans include wheeling electricity, partnering with independent power producers, paying households and businesses 'Cash for Power' gener-

ated by solar PV, the 'Power Heroes' incentive scheme for households to reduce energy demand, solar PV farms, and further optimising of the Steenbras Hydropower plant.

The City's wheeling pilot aims to test and validate the contracting framework and billing engine for full-scale implementation. This initial transaction sets the foundation for Growthpoint to wheel clean energy to all its buildings in Cape Town in the future.

Redefine's Brackengate 2 wheeling project design, with an estimated capital expenditure of R86 million, is being finalised for implementation during 2024 and is expected to take around 60 weeks to complete. It is anticipated that the project will wheel 8.8 million kWh (8.8GWh) to the national grid annually while saving 9.394 tons of carbon emissions.

R3bn investment will establish a state-of-the-art auto plant in Coega

STELLANTIS has confirmed its intention to develop a greenfield manufacturing facility in Coega in South Africa with the Industrial Development Corporation (IDC) and the Department of Trade, Industry and Competition (DTIC). Minister Ebrahim Patel, senior officials from the IDC and Stellantis Middle East and Africa chief operating officer, Samir Cherfan, met at the Parliament Buildings in Cape Town to agree on investment in the South African motor industry.

"It is a wonderful day for all South Africans when a global company of Stellantis' proportions decides to expand its manufacturing footprint in South Africa, to assemble completely knocked down units," said DTIC minister Patel. "South Africa currently has the capacity to produce close to 700,000 vehicles annually. This will add considerable additional capacity, just as we prepare to implement the African Continental Free Trade Area. The country remains a great investment destination and this commitment from Stellantis to invest in our local motor industry highlights the success of our manufacturing sector policy, its capability and potential. We look forward to welcoming Stellantis to South Africa and sharing in the detailed plan for employment and investment."

"We are delighted with the speed at which we are progressing on this project, thanks to the commitment of Minister Patel and the great collaboration with IDC, CDC and DTIC teams," commented Cherfan. "This project reflects our focus and trust in South Africa as one of the most important markets in Africa & Middle East. It is also the execution of our Dare Forward 2030 Strategy to reach over 22% Market Share in the region



Seated from left to right: Ebrahim Patel, Minister of Trade and Industry & Competition and Samir Cherfan, Stellantis Middle East and Africa chief operating officer. Standing from left to right: Kwezzi Tiya, CEO Coega; Malebo Mabitje-Thompson, acting director general the DTIC; Imran Sayed, divisional executive for Manufacturing IDC; Leslie Ramsoomar, Stellantis South Africa managing director

by 2030 with 70% regional localisation of our sales leading to over 1 million units produced. We believe in South Africa and we intend to develop industrially and commercially bringing value to our customers."

The manufacturing plant will be built in the South African Special Economic Zone (SEZ) in Coega situated near Gqeberha in the Eastern Cape. The greenfield manufacturing project is planned to be completed by the end of 2025. The first launch planned for early 2026 is a 1 T pickup truck with volumes expected to

reach up to 50,000 CKD units annually including export, in line with the industry masterplan, known as the Automotive Production Development Program (APDP). The plant will be predisposed in terms of space and painting to go up to 90,000 units a year.

Direct employment to support the first capacity step is expected at 1,000 jobs. Stellantis will be massively investing in over 500,000 hours in training and skills to develop and support the local teams to the level of global standards. The locali-

sation target is a rate of over 30%.

"The Coega Development Corporation (CDC) is enthralled for Stellantis to have chosen the proposed site in Coega for their Southern African manufacturing operations. Joining other major manufacturers in the area makes the Coega region the primary automotive hub in the country. The investment in the plant, employment, training and skills transfer will certainly benefit the region tremendously," said CDC CEO Khwezi Tiya.

"This is a much-needed and

welcomed economic boost for the Eastern Cape Province with an anticipated economy-wide impact on the province's GDP of R 664 million. Household income is anticipated to increase to R558.4 million within the Nelson Mandela Bay Municipality (NMBM) and R577.4 million for the entire Province. Most importantly, an anticipated 1,800 jobs will be created in the Metro and around 2 097 for the Eastern Cape," said Tiya

Stellantis continues to work closely with the IDC in developing a viable joint venture (JV) partnership that will be evaluated by credit committees. "Stellantis' success with similar manufacturing plants around the world is well-known and our planned JV with Stellantis to build another greenfield plant in South Africa is progressing well. The investment is in line with IDC's intent to drive investment that supports the development of the regional automobile value chain," said IDC CEO, TP Nchocho.

About Stellantis

Stellantis N.V. is one of the world's leading automakers and a mobility provider. Its brands embody the passion of its visionary founders and today's customers in the company's innovative products and services, including Abarth, Alfa Romeo, Chrysler, Citroën, Dodge, DS Automobiles, Fiat, Jeep®, Lancia, Maserati, Opel, Peugeot, Ram, Vauxhall, Free2move and Leasys. Powered by diversity, the company says it leads the way the world moves – aspiring to become the greatest sustainable mobility tech company, not the biggest, while creating added value for all stakeholders as well as the communities in which it operates.

Agriculture business confidence rebounds in Q3 2023

BY PAUL MAKUBE, SENIOR AGRICULTURAL ECONOMIST, FNB COMMERCIAL

DESPITE huge challenges stemming from deteriorating logistics infrastructure and cost pressures associated with loadshedding, the agriculture sector again showed further resilience as evidenced by the recent Agbiz/IDC Agriculture Business Confidence (ACI) outcome. About 70% of the indicators tracked showed a rebound which saw the overall ACI drifting back to breakeven with a rebound of 6 points from the second quarter of 2023 to 50 points in the third quarter of 2023.

This is obviously good news as levels above 50 points for the ACI indicate renewed optimism about

agriculture business conditions in South Africa.

We had a raft of positive news in the lead up to the release of the Agbiz/IDC ACI with the agriculture GDP rebounding strongly by 4.2% in the second quarter of 2023 following a massive contraction of -12.3% y/y previously. Good export performance with a 0.1% y/y increase in total value of agriculture exports in the second quarter to US\$3.4 billion added to the renewed optimism about the sector outlook.

The windfalls from the massive harvest of summer grains and oilseeds and increased activity for winter crops helped lift the turnover and the net operating income subindices by 9 and 4 points quarter-on-quarter to highs of 74 and 59 in quarter three of 2023.

In a country facing high unemployment, the 11 points jump in the employment sub-index to 5 points again demonstrates the importance of agriculture to the economy through its contribution to alleviating unemployment in the country.

Commitment to remain and grow the agriculture sector is again demonstrated by the capital investments sub-index which increased by 19 points to a high of 73 points. Although this may be linked to the loadshedding-induced capital investment in renewables, it shows agriculture's potential to adopt the renewable energy revolution. The good news on capital investment is that the interest



rate outlook is flat for longer which implies no increase in debt servicing costs.

Recent developments in terms of

renewed cost pressures associated with the hefty increase in fuel prices, particularly diesel in September 2023 with potentially another hike in October dampen confidence and limit further upside in the ACI above breakeven (50 points).

Nonetheless, more traction on the export front amid reduced shipping costs bodes well for sustained agriculture growth in the medium term. While El Niño is already in full swing and may complicate matters, the combination of the cumulative build-up of moisture levels over the past three years, the country's dams at good levels, and the prudent husbandry practices will help the sector weather the storm in the new season.

Seamless Integration

The comprehensive Festo Electric Automation solutions are suitable for applications from the workpiece to the cloud.

FESTO



Contact us
 Tel: 08600 FESTO (33786)
 Email: sales.za@festo.com
 www.festo.co.za



Moving with new technology - and across Gqeberha

STARTING out in 2006 as a machine shop, AE Manufacturing moved to new, bigger premises in Deal Party earlier this year, out-growing its previous space in Perseverance. Making use of high-tech CNC technology, the family-run business still maintains its capacity for manual tooling and smaller jobs.

Founder, Andrio Els (pictured), says, "There will always be a need for basic machining for smaller repair servicing and this is how our company started, so we like to ensure we do not forget where we came from while keeping a close eye on the future."

Supplying predominantly automotive customers, Els says that CNC machining is mandatory for the company to achieve high levels of accuracy and consistency in the work in which they specialise.

Although the capital cost of CNC machines is high, Els says that the output rate is higher and once AE Manufacturing's skilled machinists have set up the machine, it runs

unsupervised until the work is complete.

Apart from speed and precision, the data the machines can use to fabricate is another game-changer. Els explains, "We have in-house measuring capability utilising the latest 3D scanning and point measuring systems. This works hand in hand with the CNC machining and we use the same technical drawings in our measuring system to monitor the CNC's output. A disadvantage of basic machining is that it's not possible to achieve the same results on the first machining attempt."

"We are also capable of reverse engineering specialised parts by scanning them with our measuring system and transferring this data to our CNC machines to duplicate the part. This is particularly handy when a customer requires a spare and there are no drawings available," Els says.

Operating these specialised machines requires new skills and Els says there is an international shortage of CNC machinists, so the com-



pany relies on its in-house training to fill the gap. "We believe in upskilling our staff and over the years trained basic machine operators to become highly competent CNC machinists."

Various markets

In the automotive sector, Els says that he is expecting South Africa to continue producing internal combustion engines (ICE), although Europe is freeing up their Tier 2 capacity and gearing them to become EV component manufacturers. When local production shifts to electric vehicles

(EVs), hybrids and new energy vehicles (NEVs) there will be changes. "We are expecting a decrease in the demand for catalytic converters, for example. However, we manufacture special-purpose machinery which we automate within our group and these are used in various aspects of the vehicle, including doors, bonnets and axles. These are common to ICE or EVs, so we don't anticipate changes there."

In addition to the automotive sector, the company also supplies the FMCG market and container insert manufacturers with end-of-arm tooling and manufacturing systems. It also supplies jigs and fixtures to a wide variety of industries.

Globally competitive

The 50-strong company is a Tier 1 and Tier 2 supplier to original equipment manufacturers (OEMs) based in South Africa and has to remain internationally competitive. "We are ISO9001 accredited which is internationally recognised and we

are audited annually by an external auditor to ensure our quality and production methods align with what is expected of an international supplier," Els says.

There is a drive to localise manufacturing in South Africa and this should benefit local businesses. "Our clients can benefit from preferential procurement through our group's level 1 BBBEE company."

On being based in Gqeberha, Els says, "The city is known as the 'mini-Detroit of Africa' with many OEMs setting up in the region. It is advantageous to be on the doorstep of our customers to offer local short turnaround service and support."

Running the business with his brothers, Jaco and Nico, Andrio admits that a family business has its challenges, but that "over the years, we have learnt not to mix the aspects of business with a healthy family life. When our cars are pointing home after a hard day, we focus on home; and when they are pointing towards work the next day, we focus on work," he says.

MU welding process proves a breakthrough at UK nuclear research centre

MANDELA University's innovation hub, eNtsa recently proved its WeldCore technology is a match for the stringent quality requirements for safety-critical fabrications and repairs at the Nuclear Advanced Manufacturing Research Centre (NAMRC) at the University of Sheffield in the UK.

WeldCore technology was developed to cut core samples for material analysis from high-pressure components such as steam pipes and uses a solid-state welding technique known as friction tapered hydro pillar processing (FTHPP) to permanently plug the hole and allow the component to remain in operation.

eNtsa, from the University's Faculty of Engineering, the Built Environment and Technology, is

involved in the joint research project with Electric Power Research Institute in the USA, (EPRI) and NAMRC in the UK.

"It proved to be hugely successful and celebrated by all, and follow on projects in this regard have already been initiated," says Donnie Erasmus, eNtsa's deputy director Engineering Projects.

"It is widely accepted in the nuclear field that most manufacturing techniques should have a form of redundancy or backup for repair work, as was the case with the electron beam welding," Erasmus says.

eNtsa has a long research and collaboration history with the Electric Power Research Institute in the USA, which suggested that the Nuclear AMRC contact eNtsa in this regard.

"They reached out to eNtsa in 2021 to do a feasibility project, which was successful and led to further development work in follow on projects. This culminated in a recent demonstration weld at their campus in Sheffield."

Flying colours

The WeldCore process proved with flying colours to be able to repair defective electron beam welding on a small modular reactor at depth. The research at eNtsa involved both staff and interns during the refinement and development phase.

This technique will be used on small modular reactors in the manufacturing of reactors for the nuclear field.



Left is Dr Dreyer Bernard, Group Specialist Research and Development at eNtsa with a representative from Nuclear AMRC.

"We are hoping to use this to promote and generate a network in the European, and International arena,

and demonstrate eNtsa capability to the international industry," Erasmus said.

SA's hydrogen economy has potential to boom with funding kickstart

SOUTH Africa's plan to raise US\$1 billion to kickstart the country's hydrogen economy in partnership with Denmark and the Netherlands bodes well for a new energy future, says CEO of the South African National Energy Development Institute (SANEDI), Dr Titus Mathe.

The July announcement that Denmark and the Netherlands would join forces with South Africa to raise US\$1 billion was made at the business forum on green energy transition and green hydrogen partnership impact that was held in Pretoria in the third week of June.

The fact that Mark Rutte and Mette Frederiksen, the prime ministers of the Netherlands and Denmark, respectively, attended the forum communicated the two countries' support for South Africa's energy-transition ambition.

This support is well placed when one considers the context South Africa has already created for a hydrogen economy. Apart from resource advantages – abundant renewable energy sources in the form of wind and solar, accessibility to sea water which could easily be desalinated to produce water for use in producing hydrogen using electrolyzers, and the cobalt, nickel, platinum, and other minerals required to produce and use hydrogen fuel cells and batteries – South Africa also has technical and knowledge advantages. Chief among

these is the country's well-developed expertise in the Fischer-Tropsch technology and the production of synthetic fuels, which can be easily transferrable to green-hydrogen technology. As an energy carrier, hydrogen is already used in a wide range of applications in South Africa (albeit currently produced from fossil fuels). As such, its safe storage and transport are well understood.

The country also has an established manufacturing sector and a vast labour force that is "completely trainable", in the words of our Green Hydrogen Commercialisation Strategy. All of this means the country has the potential to decarbonise traditionally hard-to-abate sectors, such as heavy-duty transport, aviation and shipping, and industries such as steel, cement, and ammonia/fertiliser manufacturing.

Acting on this potential, South Africa started investing in hydrogen research, development, and innovation more than 12 years ago through a programme called Hydrogen South Africa (HySA). More than R500 million has since been invested in research and development activities, leading to South Africa developing intellectual property such as membrane electrode assemblies and the integration of systems in the various sectors of the hydrogen economy. During the Covid-19 pandemic, for instance, South Africa powered a field

hospital using hydrogen fuel cells that combined national and international intellectual property.

Over the past few months, Infrastructure SA, a programme within the Ministry of Public Works, identified a pipeline of 19 green-hydrogen projects valued at more than R300 billion. The Industrial Development Corporation (IDC) also secured €23 million in grant funding from the German government to support the development of South Africa's green hydrogen economy and help accelerate the country's transition to renewable energy.

Internationally speaking, the Carbon Border Adjustment Mechanism (CBAM) states that any product manufactured outside the European Union using the so-called "dirty energy" will be subject to a significant carbon tax. Given that South Africa is a substantial exporter of products like steel, cement and fertiliser, carbon neutrality and products produced using renewable energy and green-energy carriers will do much to secure and grow our export markets. The knock-on effect on these and other value chains will create considerable economic benefits, including job creation and mega-infrastructure development in underdeveloped areas.

From a domestic point of view, several policies are in place to support South Africa's participation in the hydrogen economy.

Quality Components Technical Expertise Superior Service | PART OF EVERY PROCESS



Going Above and Beyond to Enhance Your Operational Efficiency

Over the past four decades, BMG has built up extensive product divisions and an unrivalled distribution network, along with a rock-solid reputation as Africa's foremost supplier of engineering components. A convenient, single source of supply to the full spectrum of the industry.

Along the way, we've nurtured a technically-proficient mindset that enables us to enhance our customer's efficiencies, productivity and ultimately, their profitability.

Today, this ongoing commitment to being a valuable 'Part Of Every Process' is proudly manifested in ways that go well beyond the physical products on offer.

B-BBEE 2
EMPOWERING SUPPLIER

ISO 9001 Certified
ISO 14001 Certified
ISO 45001 Certified

THE WORLD'S BEST BRAND, BOLSTERED BY A RANGE OF SPECIALIST SERVICES:

- Custom Design and Evaluation of product and systems.
- On-site Installation, Troubleshooting, Maintenance and Support.
- Condition Monitoring and Preventative Maintenance.
- Energy-Efficiency Studies and Recommendations.
- Hands-on Customer Training.

BEARINGS • SEALS • POWER TRANSMISSION • DRIVERS & MOTORS • MATERIALS HANDLING
FASTENERS & TOOLS • HYDRAULICS • FILTRATION • LUBRICATION • FIELD SERVICES



An Invicta Holdings Group Company

www.bmgworld.net

f t i n

MOTORS, DRIVES & TRANSMISSIONS

Medium voltage drives boost industry's sustainability

IN a world increasingly focused on sustainability, ElectroMechanica (EM) is taking a significant step towards energy efficiency in Southern Africa's industries. EM recently announced the expansion of its portfolio to include medium voltage drives (MV VSDs), a move that holds promise for both sustainable energy and productivity improvements.

With the global commitment to Environmental and Social Sustainability strategies (ESS), industries worldwide are striving to decarbonize the planet. One critical aspect of this effort is energy efficiency, and it's no secret that industries are among the biggest consumers of electricity. Recent research from the International Energy Agency (IEA) revealed that industrial applications account for a whopping 30% of the world's electricity consumption. Among the culprits are over 300 million electric motors, guzzling up to 65% of all industrial electricity. Achieving sustain-

ability while reducing energy costs without compromising productivity is no small feat.

EM envisions a digitally and sustainably electrified future for Southern Africa. The company's mission is to tackle issues like unsafe power distribution, inefficient energy consumption, manual electrical processes, and costly supply chains through innovative solutions.

The power of VSDs

A key player in EM's strategy is the Variable Speed Drive (VSD). By applying VSDs to variable torque (VT) and constant torque (CT) motor loads, energy savings and productivity improvements become possible.



Notably, VT applications often offer the most substantial electricity savings. EM emphasizes that with proper application, a VSD solution can quickly pay for itself through reduced electricity consumption.

Delta Electronics collaboration

Since 2006, EM has been the exclusive distributor of the Delta industrial automation range in the Southern African Development Community (SADC). This partnership has now expanded with the launch of Delta's medium voltage (MV) VSD range in Southern Africa.

These MVF23 and MVF20 series drives cater to VT and CT electric motor loads. Their advanced

technology produces near-sinusoidal output motor waveforms, minimising losses, vibrations, and overheating. They are adaptable for both new and existing motors in retrofit applications.

What sets the MVF23 and MVF20 series apart is their innovative design. They consist of modular low-voltage power cells connected in series, integrated with a low harmonic phase-shifting transformer. This transformer ensures high system efficiency and compliance with IEEE-519 standards. The drives have a small footprint and require no rear or side entry for maintenance, simplifying retrofitting.

Enhanced features

The MVF23/20 series comes with several standard features to optimize uptime, safety, and reliability. These include a 10" HMI touchscreen, IP42 protection, conformally coated boards, mechanical key interlock, and EtherNet/IP compatibility. They

can operate as standalone solutions or integrate seamlessly into a PLC/SCADA system.

A Sustainable Future

ElectroMechanica emphasizes that all their MV VSD solutions are engineered to order, undergo rigorous testing, and adhere to relevant end-user standards. This commitment to quality ensures that these solutions are reliable and efficient. EM also invites customers to participate in factory acceptance tests.

With its expansion into medium voltage drives, ElectroMechanica is paving the way for sustainable industrial practices in Southern Africa. By promoting energy efficiency and productivity, EM's collaboration with Delta Electronics is poised to make a lasting impact on the region's industries. Sustainability and energy efficiency are no longer distant goals; they are becoming a reality in the heart of Southern Africa's industrial landscape.

Modular design multiplies flexibility for gearbox users

BY simplifying its configuration of components, Sew-Eurodrive's modular design delivers the flexibility required to achieve technically unique innovations with parts that are readily available and cost effective.

"Our modular design allows the same part to be used in different sizes of gearboxes, which facilitates more economic production and less investment in stockholding," explains Sew-Eurodrive's head of engineering, Andreas Meid. "By streamlining the number of parts required for a product range, this also allows improved component availability and turnaround time."

For instance, modularity gives the company's standard gearboxes a high degree of adaptability, so they can be run in either a vertical or

horizontal orientation, says Meid. The customer therefore only needs a single housing in stock as it can be used vertically for an application such as agitation or horizontally for a conveyor system. The majority of the parts are then interchangeable across various applications.

Sew-Eurodrive Johannesburg sales manager Jayson Jackson points out that most of the gearboxes' pinion shafts would be suited to the specific gearbox size range, while the gear wheels would have more flexibility to be used in different size gearboxes.

"This principle has allowed the production of fewer specialised parts while still giving customers access to a wide range of options when developing a solution to their requirements," says Jackson.



Modularity also has positive impacts on the manufacturing process, which creates benefits for customers in the form of cost control and

availability of stock. Project engineer at Sew-Eurodrive, Bruce Farthing, notes that production of components can be streamlined to improve efficiencies, lead times and masses.

"This also means we can focus our innovation efforts on a more limited number of parts, making a greater technological impact," says Farthing. "Moreover, the modular principle makes the assembly of gearboxes simpler across a range of applications."

He refers to a recent example of the flexibility of SewEurodrive products, when girth gear was installed for a mining customer. The girth gear configuration requires two gearboxes – one which is orientated to a left-hand application and the other which is right-handed.

"This is a critical item of equip-

ment for the plant, so the customer needed on-site spares," he says. "Due to the modularity of our design, the mine needed to only hold one set of spares as our universal housing range can be adapted to either left-handed or right-handed use."

Jackson says the Sew-Eurodrive range holds similar benefits for conveyor applications. Where a customer has multiple conveyors on site, they can minimise the spares inventory as the housing can be inverted to operate on either side of a conveyor. He notes that the modular design also creates useful flexibility in the servicing of gearboxes.

"If a customer calls us with a damaged input shaft assembly, for instance, we can conduct a pre-assembly in our factory before delivering it to site," he says.

High performance composite V-belts for reliability in the HVAC sector

ACCORDING to BMG, reduced life of V-belts operating in the heating, ventilation and airconditioning (HVAC) sector, is a major concern to the industry, in spite of users implementing rigorous system inspection programmes.

BMG specialists recommend that replacing conventional rubber V-belts used on air handling units (AHUs) with Fenner high performance composite (HPC) V-belts, is a dependable solution that offers many benefits, including higher drive efficiency, greater comfort, reduced downtime and extended service life.

"BMG's Fenner HPC V-belts have been proven to maintain 100% of their belt life at 80°C, in comparison with only 25% belt life from a rubber belt at the same temperature," explains product manager, power transmission division, BMG, Westnar van der Westhuizen.

"As the internal operating temperature of a rubber V-belt surpasses 30°C, adhesion between the rubber and reinforcing cords begins to break down, delamination and flex fatigue occurs and the rubber compound deteriorates and cracks, causing premature belt failure.

"BMG's range of Fenner HPC V-belts includes the PowerTwist Plus



BMG specialists recommend that replacing conventional rubber V-belts used on air handling units (AHUs) with Fenner high performance composite (HPC) V-belts, is a dependable solution that offers many benefits, including higher drive efficiency, greater comfort, reduced downtime and extended service life

and NuTLink V-belts for classical section drives and SuperTLink V-belts for applications using metric wedge SP rated belts.

While simple in concept, these composite V-belts deliver exceptional performance, solving many of the field problems associated with conventional rubber V-belts.

"This range is manufactured from custom reinforced polyurethane elastomers, with multiple plies of polyester fabric, that offer excellent resistance to high operating temperatures. The effective link design results in belt constructions which limit flex-induced heat build-up and ensures a greater surface area that dissipates any heat generated more effectively, compared to a solid construction rubber V-belt.

"Another important benefit of upgrading from rubber to HPC V-belts, is reduced belt installation time. It is easy for users to make an HPC V-belt to the required size by hand and roll it onto an AHU drive, just like a bicycle chain, with no tools required."

PowerTwist Plus drive belts, which do not require re-tensioning after the initial run-in, combine extremely high strength with low stretch and have the same power ratings as conventional V-belts. The elasticity of woven polyurethane fabric enables these belts to be stretched over a pulley drive without any damage.

This series is designed for decreased drive vibration, resulting in increased bearing life. Fenner PowerTwist Plus belts are easily made up to the required length in seconds and there is no longer the need to move or dismantle any drive component. It is also easy for users to hold the correct inventory at all times.

Fenner NuTlink V-belts, with a quick connect T-Link design, are suitable for heavier, shock-loaded applications and reciprocating engine-powered drives.

SuperTlink SP wedge V-belts also have a quick connect T-Link design, with suitability to replace metric V-belts of SPZ, SPA, SPB and SPC cross sections.

MEDIUM VOLTAGE DRIVES

HIGH-PERFORMANCE RELIABLE DRIVES

MVF23 SERIES | MVF20 SERIES






Optimal Reliability

- System efficiency >98.5% (excluding phase-shifting transformer)
- Near unity power-factor (input) throughout the motor speed range

Small Footprint

The compact structure can reduce the requirements for site space.

Lower Harmonics

- Multi-pulse phase-shifting rectification technology reduces grid current harmonic content effectively and meets IEEE 519-1992.
- Multilevel voltage output and starting current control reduce impacts on the motor.

High Efficiency

System efficiency is higher than 98.5% (excluding phase-shifting transformer), saving energy and reducing carbon emission.



Scan the QR or visit mv.em.co.za to develop a customised MV VSD solution




Automation company achieves significant empowerment level status

ROCKWELL Automation has been awarded Level 2 in the broad-based black economic empowerment (B-BBEE) programme.

"This rating is a notable accomplishment and testament to the commitment of Rockwell Automation to socio-economic development initiatives and driving a more inclusive economy," said managing director & country sales director sub-Saharan Africa, Rockwell Automation, Canninah Dladla. "This Rockwell Automation South Africa team has worked

hard for the accreditation, which is a great door opener for governmental, parastatal organizations and businesses governed by B-BBEE codes."

To achieve B-BBEE Level 2, the company has undertaken significant changes within the South African organisation. When it comes to ownership criteria, the South African entity was challenged by the global nature of the enterprise, so Rockwell Automation partnered with local entities and mentored employees in management positions.

The company had to address a disparity in the level of skills development of its employees. There is now a strong focus on skilling the previously disadvantaged demographic through continuous personal development or MBA programmes. In addition, Rockwell Automation is positioning itself externally as a learning organization by taking in students through the SETA programme. Significant efforts have also been made to empower and educate disabled employees. The local community also feature heavily in the strategy including programmes

that empower young girls to go to school, as well as supporting local orphans.

"This accreditation reflects Rockwell Automation's ongoing commitment to inclusivity, which we will continue to make a priority," Dladla added. "Our commitment to diversity, equity and inclusion is built into our business strategy and our daily interactions. Our people are the foundation of all we do and creating an environment where all employees are enabled and inspired to do their best work is fundamental to our success."

Partnership expands footprint into Uganda

WEG, as part of its drive to expand the WEG footprint in East African markets, is taking significant steps to increase its presence in Uganda by partnering with company Petrok as its Value-Added Reseller (VAR). Petrok's local presence and technical expertise, along with the popularity and reliability of WEG products in the market, will likely facilitate this expansion.

WEG's regional sales manager for East Africa, Theodul Mwema, says the anticipated economic growth from projects like the East African Crude Oil Pipeline (EACOP), along with the existing strength of sectors such as agriculture, manufacturing, utilities, cement and oil and gas in Uganda, offer potential opportunities for WEG to offer its products and solutions.

"This is an exciting step as we look forward to reaching more customers in Uganda with WEG's range of electric motors as well as medium and high voltage solutions," he says. "We have been supplying customers in Uganda for over a decade, and this appointment builds our support

for them and opens new markets for us. Our commitment to delivering efficient, reliable products with a low total cost of ownership, as exemplified by our W22 IE3 motor, shows our customer-centric approach which is appealing to businesses in Uganda."

Mwema highlights that the coffee sector already has a strong reference base, for instance, as many coffee factories used Brazilian processing machines which are fitted with WEG motors, drives and soft starters.

With agriculture being the biggest contributor to Uganda's economy, other significant sectors include manufacturing, utilities, cement and oil and gas, he explains. There has also been considerable investment in power and water projects in East Africa, notably from Asian countries.

Commenting on the EACOP, Mwema says when completed this major project will see the transportation of Uganda's crude oil almost 1,450 km from Kabaale in Uganda to Tanga in Tanzania.

"Petrok was selected as our VAR following a stringent vetting process,

and we are confident they will deliver the high standard of support to our customers that we expect," he says. "The company has the necessary experience in our field of operation, with a strong technical team of engineers and technicians with the right product knowledge."

He says Petrok's premises in Kampala allows for local warehousing of WEG Low Voltage products such as electric motors, drives and others, as well as workshop facilities for small works. The company's sales team and customer base across Uganda also ensure customers will be well served and distribution channels expanded.

"With the quality and reputation of WEG products, we can ensure players in the Ugandan market will benefit from the same low total cost of ownership as our customers everywhere," says Mwema. "This includes the five-year warranty on our popular WEG W22 IE3 motor, a promise of reliability that few of our competitors can match."



WEG, as part of its drive to expand the WEG footprint in East African markets, is taking significant steps to increase its presence in Uganda by partnering with company Petrok as its Value-Added Reseller

Drive ranges aimed at the mid-range industrial segment

PARKER Hannifin, a global leader in motion and control technologies, has introduced two new ranges of AC inverter drives that meet the latest requirements for the industrial market. Fitting between Parker's existing AC10 and AC30 series, the AC15 and AC20 provide a rich set of features for a mid-range inverter family without the cost of 'system drive' features that are not always required. These include an onboard webserver, SD card slot, 'Fire Mode', two independent PID loops and multi-stage sequencing functions.

Parker's new drive ranges are aimed squarely at the mid-range industrial segment, with features making them ideal for multiple applications, from simple fan/pump controllers and conveyors to multi-drive production lines requiring speed following and winder calculations.

The AC15 series has been designed to be backward-compatible with both the AC10 series and its predecessors. Offering Safe

Torque Off to SIL2/PLd and Ethernet communications as standard, the AC15 aims to provide a low-cost and compact solution for open-loop motor control applications.

The AC15 is available in 230V single-phase, 230V three-phase and 400V three-phase variants, with power ratings between 0.37kW and 30kW. All feature a high input/output count and fully configurable internal block diagram, and both induction and PMAC motor types are supported.

The AC20 series expands upon the AC15 in terms of both functionality and power ratings, covering the 1.5kW to 180kW range in 230V single-phase, 230V three-phase and 400V three-phase variants. Connectivity is extended to provide both EtherNet/IP and Profinet IO as standard through the onboard

Ethernet port, while further fieldbus options may be fitted via a dedicated communication option 'slot'. Further expansion options include a low-cost encoder speed feedback card and a general-purpose IO expansion card. Both expansion option cards may be fitted to the AC20 drive in either of its two option slots, allowing for closed-loop motor control with simple speed following, an open-loop drive with exceptionally high IO count, or even a mixture of the two.

Additional features of the AC20 over its lower-cost sibling include an alphanumeric

onboard display, inbuilt winder functionality and over 100 programmable internal wiring connections for ultimate application flexibility.

Key to the ease of use and functionality of both the AC15 and AC20 drive series is Parker's renowned DSELite programming software.

DSELite allows the programming of Parker inverters through an intuitive block diagram approach, where each block represents a drive function, and each block can be linked to another with a simple 'wiring' system. DSELite has been upgraded to allow programming and real-time online monitoring of the application over Ethernet when used with AC15 or AC20 and now includes a fast oscilloscope with data logging facility.



New range bends the rules of size, power and speed

LAUNCHED earlier this year, the Hägglunds Quantum hydraulic motor range exceeds previous performance limits in torque and speed and combines them with high efficiency. The direct drives can be used in heavy-duty and mobile applications. Hägglunds Quantum is the new name for the previously known Hägglunds CB range. "The Quantum motor has evolved so significantly over time that it can no longer be considered the same motor of the CB range. Tweaks in design and materials have increased its efficiency and tripled its life expectancy, making it the ideal basis for a bold new step in the market," says Hägglunds Drives South Africa managing director, Leif Duwel.

The Hägglunds Quantum range comprises two parts: Hägglunds Quantum, the motor, and Hägglunds Quantum Power. Hägglunds Quantum Power features additional ports and an innovative internal design, which enables higher speeds with full torque capacity and high efficiency.

The Hägglunds Quantum range offers a top speed of over 150 rpm, yet it provides a

sustainable maximum torque of more than 350 kNm. At corner power, where the two extremes meet, users can achieve a powerful 3 MW – without sacrificing compactness or efficiency. Hägglunds Quantum Power can deliver high power with greater economy and sustainability than any previous solution.

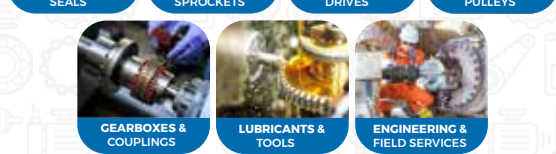
"The Hägglunds Quantum range rewrites the rules of power density, especially when it comes to efficiency at higher speeds," says vice president of Sales, Hägglunds Products, Wolfram Ulrich. "By stretching the limits so far beyond previous solutions, it introduces possibilities for greener operation, mobile applications and more."

Hägglunds Quantum Power is lighter in weight than the previous CBp motor. This saves resources and reduces emissions during production and transport. For mobile applications, this means reduced weight and fuel consumption.

Hägglunds is a Bosch Rexroth brand, a leading global supplier of hydraulic drive and control technologies.



WHEN YOU STOP MOVING, SO DOES YOUR PROFITS STAY in motion WITH Bi.



www.bearings.co.za



BEARINGS INTERNATIONAL

www.bearings.co.za | +27 11 899 0000 | info@bearings.co.za | 24-HR HOTLINE: 083 250 9191 for all emergencies.

METALS, FABRICATION & MACHINE TOOLS

Game of Steel: Steel Awards 2023 to celebrate the power of steel past, present and future

NOMINATIONS for this year's Southern African Institute of Steel Construction (SAISC) Awards have featured in everything from local community newspapers to the Guinness Book of Records and have taken shape everywhere from Cape Town to West Africa.

The judging of almost 40 diverse nominated projects showcasing pioneering innovation and courageous design is complete, and planning for this year's flagship event in Johannesburg on October 19 is rapidly gathering momentum.

"This iconic annual steel industry event, which enables the Institute to promote the capabilities of steel - an infinitely diverse, resilient material of construction - provides an important platform for honouring the hard work of individuals and companies across the entire value chain," says SAISC CEO Amanuel Gebremeskel.

Glamour and fun meet technology

SAISC marketing and management consultant, Denise Sherman, says that although the red carpet event - commonly referred to as the 'Oscars of the steel industry' - will add some glamour, it is the ongoing hard work and innovation invested in the nominated and award-winning



SAISC CEO,
Amanuel Gebremeskel



SAISC marketing and management
consultant, Denise Sherman

projects which will be the real drawcard.

Sherman says that the SAISC is expecting to host more than 750 industry attendees, at what promises to be a very colourful 'dress up' event, with its mediaeval Game of Thrones theme.

She hints that many popular aspects of former events have been retained - such as plenty of time for networking in the evening's programme - however, a few changes can be expected. These include fun elements such as prizes for the 3 best-dressed individuals; and one for the best-dressed table.

This year's Game of Thrones theme will not only add a fun element, taken as it is from the hit HBO series - but also highlights the impor-

tance of steel throughout the ages.

"Over thousands of years, few things had had as significant an impact on the development of the world as steel, which has effectively defined the way that people built structures, cultivated food, fought wars and travelled - to name but a few socio-political elements of life through the ages hallmarked by steel," Sherman observes.

She adds that the entire process of nomination and presentation of projects has also been completely digitised this year, featuring an online template provided to assist with submissions to the SAISC's recently revamped website. This has significantly improved the quality of entries this year.

"Both the nominators and project

teams have embraced technology to showcase their projects. The quality of the project entry information is what makes the Steel Awards work so well, and is integral to their success," she says.

Pan-African punch

"On a more serious note, the Game of Thrones portrays turbulent geo-politics and intense competition - very similar to what the world is experiencing currently, and which is impacting the steel industry not only internationally, but also across the African continent," Gebremeskel comments.

This year, he notes, the Steel Awards have a distinctly Pan-African flavour, with the addition of a new Pan-Africa Trailblazer category: "We have a number of entries from all over the African continent. This year, the Awards demonstrate very tangibly how South Africa's products are being used all over the continent, and feature projects which range from mining to the construction of a church," he says.

"The quality of the projects featured through these awards is particularly important. We are highlighting that the South African steel construction sector can successfully execute quality, world-class projects throughout Africa," he adds.

Furthermore, as the African Continental Free Trade Area (AfCFTA) agreement gains momentum and supply chains across Africa combine to drive growth, enabling companies to supply, process, fabricate and construct steel structures in many industries, Gebremeskel advises that it is important that an event such as the Steel Awards has evolved into a truly continental one.

A celebration of diverse collaboration

He also says that the number of nominations has increased this year, as have the number of entries from outside South Africa - as well as the number of projects featuring project interviews with steel supply chain professionals, such as engineers and architects.

"We always want to hear from the people who are engaging with our industry, for example specifying and designing in steel. This year, a number of architects, engineers, contractors and even project owners have participated in project interviews and entries. This also signifies the importance they ascribe to the Steel Awards, investing their time and efforts to ensure high standard entries," he says.

Joint effort explores technologies to help reduce carbon footprint of steel production

TATA Steel Ltd and global technology leader ABB have signed a Memorandum of Understanding (MoU) and will work together to co-create innovative models and technologies to help reduce the carbon footprint of steel production. ABB will bring global experience in automation, electrification and digitalisation to the mining and metals industries.

Tata Steel is among the top global steel companies with crude steel capacity of 35 million tons per annum and is committed to major sustainability targets including the achievement of carbon neutrality by 2045. In line with its aspirations, the steelmaker has a medium-term target to reduce carbon emissions to less than two tons of CO₂ per ton of crude steel in its Indian operations by 2025.

The two companies will focus on

system-level assessments of Tata Steel's manufacturing plants and production facilities for evaluation and co-development of short and long-term options for energy efficiency, decarbonization and circularity.

"Steel companies know there are opportunities to improve their processes, and Tata Steel is one of the leaders in this movement towards energy efficiency and reduction of carbon footprint," said group vice president and global account executive for Tata Group, ABB, Vipul Gautam. "World Economic Forum figures anticipate the energy transition will require as much as three billion tons of metals over the medium term; six times more mineral inputs by 2040 to reach net-zero emissions globally by 2050. ABB is confident in working with our customers and partners to evolve how steelmaking is powered to help reach production

and environmental targets."

Tata Steel is committed to sustainable development and growth as an integral part of its business philosophy. To ensure sustainable growth, the company is working on deployment of key enablers for deep decarbonization, including the use of more scrap in steelmaking, use of alternate fuels such as natural gas and green hydrogen, use of renewable energy and deployment of carbon capture and storage/utilisation technologies. Tata Steel expects to increase capacity to 40 million tons by 2030, hence this collaboration with technology partner ABB is a key enabler to achieve that growth in a sustainable manner.

ABB and Tata Steel will explore energy optimisation via hydrogen as an alternative fuel for upstream processes and energy reduction as well as substitution through fully



integrated electrification and digital systems such as ABB Ability eMine and e-Mobility solutions and energy efficient motors.

The global steel industry contrib-

utes between 7 to 9 percent of global fossil fuel CO₂ emissions, according to various sources including the International Energy Agency (IEA).

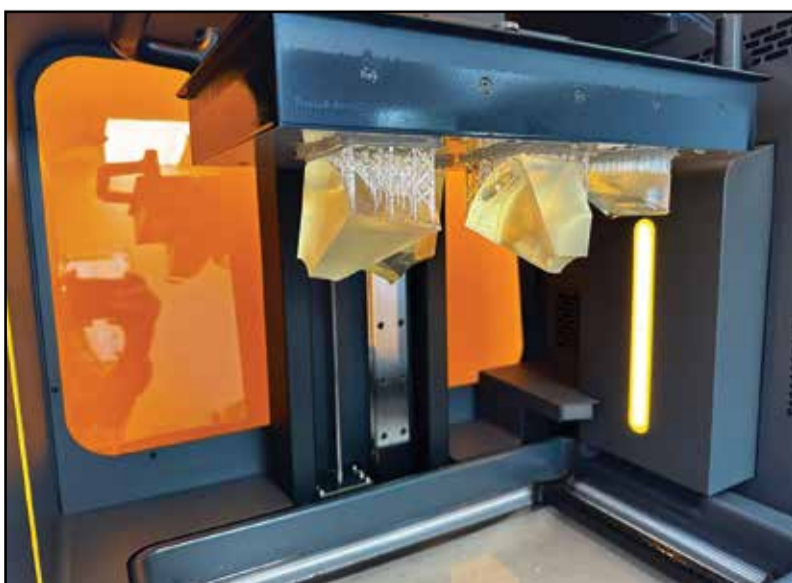
Industrial 3D printing can be a quick, affordable solution

GLOBAL multidisciplinary engineering business UMP is one of the few companies in South Africa offering professional 3D industrial printing. From receiving an initial enquiry to proposing a solution, making the necessary moulds and manufacturing the product, the company is a one-stop shop for turnkey solutions, says UMP product engineer Saahil Bhartu.

The company decided to launch its 3D printing service about three-and-a-half years ago when involved with a complex hydrocyclone project.

"We found that the cost of a one-off steel mould was so prohibitive that 3D printing was the only solution," says Bhartu. UMP acquired its first fused deposition modelling (FDM) printer and has not looked back since then.

"Once we committed to this initial project, it just grew to incorporate even more projects, which has given us a price competitive



edge in the market," says Bhartu. UMP's 3D printing service covers

design and manufacturing, with clients approaching the company with

bespoke requirements. "We carry out the design, make the moulds, manufacture the product and then ensure it is delivered to the client within the specified timeframe."

"The addition of 3D printing has significantly expanded UMP's mould manufacturing capability," adds Bhartu. "It gives our customers a different option that is inherently more cost-effective. In terms of turnaround time, it is much faster than CNC machining or traditional manufacturing methods. We simply design, analyse, print, and we have our parts. Depending on the size of the component, 3D printing is on average 30% to 40% faster."

Such has been the success that UMP has established itself as a leader in industrial 3D printing in South Africa. This year it acquired a stereolithography (SLA) printer, which together with FDM are the two main 3D printing processes.

FDM works with a range of materi-

als from basic prototyping materials to high-end engineering grade composite materials. The technique is ideal for basic proof-of-concept models and quick and low-cost prototyping.

On the other hand, SLA uses liquid resin to produce high-resolution parts with smooth surface finishes and fine details which is sometimes difficult to achieve with FDM.

"It represents a huge investment, but we are happy with the outcome as it provides a major cost-saving alternative for us and our clients," says Bhartu. The next step is to move beyond mould making into final product design and even more complex parts.

"We want to get our name out there as a leader in industrial 3D printing as many of our clients do not realise it is a significant capability we have built up over the years," concludes Bhartu.

DISASTER MANAGEMENT, HEALTH & SAFETY

Opinion: The facts about safeguarding essential business data against emerging threats

BY ASLAM TAJBHAI, SOLUTIONS ARCHITECT
AT DMP SOUTH AFRICA

THE evolving nature of cyberattacks poses a constant threat to organisations, and staying up-to-date with the latest technology is no longer sufficient to ensure security. With the emergence of Artificial Intelligence (AI), cyber-criminals now have the capability to manipulate voices and other biometrics, enabling them to launch convincing phishing or voice phishing attacks. This use of AI is just one example of the technologies that attackers may employ today or in the near future, but these developments highlight the alarming reality that businesses face in a world where criminals are adept at utilising cutting-edge technology to automate their criminal activities. To combat this, organisations must prioritise the protection of their data. Only by understanding the risks and taking the necessary precautions can businesses safeguard their data, maintain customer trust, and stay one step ahead of emerging threats in the dynamic cyber-security landscape.

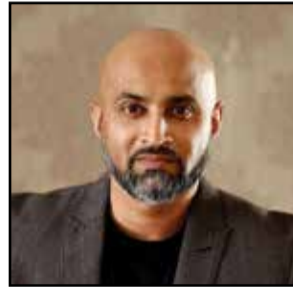
Cyber-threat, real danger

Businesses face a multitude of cyber-security threats that can jeopardise sensitive data

and operations, with ransomware being a significant concern. This malicious software encrypts or locks files, rendering them inaccessible until a ransom, often in the form of cryptocurrencies, is paid. However, there is no guarantee that the files will be decrypted even after payment. Phishing attacks are another prevalent threat with many different faces, such as smishing (SMS phishing), voice phishing, and URL phishing, in which cybercriminals create fake websites resembling genuine ones to steal login credentials. Another form of phishing is Business Email Compromise (BEC) which targets organisations and individuals intending to steal money or critical information.

Reactive technology and proactive education

Equally important for businesses are proactive real-world measures such as internal staff security training, which is an often overlooked but critical component of digital asset protection. By providing thorough cyber-threat training, employees can learn to identify and thwart potential threats, such as phishing websites



and other criminal tricks, and develop the ability to promptly recognise suspicious emails. Along with taking care of the preventative technological and training components, one of the most important elements of an effective cybersecurity foundation is the prioritisation of data protection.

Unyielding defence: advanced backup solutions

A robust backup solution with off-site, immutable copies of data provides a strong defence against ransomware and similar attacks. Today's leading cloud-based data management solutions incorporate early warning technologies that enhance data protection by detecting and securing against potential threats before they occur. It offers defence and protection for organisational data in the event of a breach, ensuring recoverability even after a cyber-attack. One data protection vendor in the market is already ahead of the curve, providing in-depth threat monitoring and cyber deception capabilities for both backup and production environments. For uncompromised business continuity, a clean, untouchable backup is

essential. To avoid backing up compromised data, a thorough scan is necessary to exclude any content containing malicious software or malware.

Align system security with data protection

Taking a proactive approach to data backup and recovery is key to maintaining a strong cybersecurity posture and mitigating the potential impact of security incidents. This enables true digital resilience with the ability to minimise disruption following an incident and resume business rapidly and with minimal impact on productivity, staff and customers.

Ultimately, businesses must also take care to ensure that all systems, particularly operating systems and antivirus software, are patched and updated. Endpoint security has become even more important as the majority of malware originates from endpoint devices, particularly Internet of Things (IoT) devices, making it non-negotiable to have reliable antivirus software installed. By combining reactive and proactive measures

that cover both the technology fronts and the human element, organisations can significantly enhance their cybersecurity posture and mitigate the risks posed by business email compromise and ransomware attacks.

Mitigating fire risk with flame-resistant rubber screen panels

MULTOTEC has developed a range of flame-resistant rubber screen panels that self-extinguish in under 60 seconds, thereby significantly reducing the risk of fire and the associated loss of valuable production time, and plant and staff safety hazards.

Multotec responded to a challenge facing iron ore producers in Australia by developing a rubber screen media solution that negates the risk of fires associated with hot work on screen decks.

Product manager: screening media at Multotec, Shawn Faba, explains that while the solution was developed to meet the stringent performance and safety requirements of the Australian mining industry, other mining operations across the world would also benefit from its adoption.

Multotec's flame-resistant panels have been scientifically developed in collaboration with international academic institutions and raw material suppliers.

The product has been tested under controlled laboratory conditions, certified accreditation trials, as well as on a number of sites in real-world conditions.

Significant potential benefits

"When we consider an interruption to any production environment, the downtime could easily translate into revenue losses that run into millions of dollars. For example, in Australia, mining houses are tonnage-driven, meaning when you have unplanned downtime of two hours, it could translate to the loss of millions.

Fires in the plant can shut down whole modules for weeks at a time. Australia's miners operate in campaigns – for instance, they'll operate for three months and then they'll do maintenance. They don't stop haphazardly.

"Our product has undergone rigorous testing and has been confirmed to operate continuously to fit existing shutdown campaigns, meeting the mining industry's stringent requirements. Ensuring high-quality equipment is essential to minimise downtime. This is especially beneficial for plants that operate around the clock, as interruptions can be costly and disruptive," says Faba.

Developed with safety in mind

"To make the rubber screen panels flame-

resistant, we modified the chemical composition of the raw materials used to manufacture the panels. However, the flame-resistant screen panels can be used without compromising on efficiency, compared to conventional rubber screen media," adds Faba.

He notes that Multotec is proud of the fact that its flame-resistant rubber screen media has received international acceptance and is in use at processing plants of some of the world's leading iron producers. The flame-resistant screen panels can be used in all screening applications for a variety of duties, both wet and dry.

Fit for any screening-related application

"While we currently supply the flame-resistant rubber screen panels for iron ore screening applications in Western Australia, these panels can also be used in any screening-related application. They can be used extensively in all mineral processing applications, such as coal, iron ore, copper, platinum, diamonds, manganese, and zinc, among others."

In addition to providing the greatest level of fire safety, Multotec's flame-resistant panels



also increase optimal screening performance and plant availability, are available in hard (PD70) and soft (PD45) durometer rubber, and remain robust and extremely reliable under the toughest mining conditions.

The importance of fire engineering consulting, planning, and design

ASP Fire provides holistic, proactive, and preventative fire solutions based on integrated fire risk assessment, training, and consulting, along with the installation and maintenance of fire detection and suppression systems that meet SABS, NFPA, FPASA and SAQCC standards," explains CEO Michael van Niekerk.

Established in 2013, ASP Fire provides fire engineering and HVAC consulting and turnkey fire engineering services across Africa. It adds value to its clients by focusing on the prevention, detection, and suppression of fires in key areas by providing the following services.

The company conducts on-site client fire risk assessments and fire investigations. It also drafts fire protection plans and performance-based rational designs and designs mechanical HVAC and wet services for buildings. The company ensures cost-effective designs by eliminating high-cost elements at the design phase where possible.

"We operate across the entire continent from our Gauteng base, providing professional,

accredited fire risk management and support to our clients. We design, install, and maintain a full range of fire detection and suppression equipment suited to your needs," explains van Niekerk.

The ASP Fire team have been directly involved in a number of diverse fire engineering projects, either as lead engineer or as a part of a professional team. Its client base centred in South Africa covers Africa and includes companies from Blue Chip listed multinationals to owner-managed micro-enterprises.

ASP Fire has several well-developed operational nodes within Southern Africa that have evolved around strong client relationships. The company has a development programme for young, black Africans registered with the Manufacturing Seta, MERSETA, through which talent is fostered by means of bursaries, skills development, training, coaching, and mentoring. ASP Fire is funding the studies of a female African engineering student at Wits University through the ASP Fire bursary programme.



"To conduct a fire risk assessment or rational design, a fire risk consultant visits the premises to undertake a comprehensive evaluation of all areas of the property, looking at all factors in terms of fire safety and risk in detail. Sound fire engineering principles are applied to ensure that the design complies with the life, property and environmental fire safety objectives

required by law," says van Niekerk.

Upon completion of the fire risk assessment and drafting of a rational design report, the company recommends practical actions to be followed to ensure compliance. The report comprises a detailed and documented fire risk assessment, as well as fire engineering calculations where required, covering all aspects of fire risk and safety.

This guides clients to protect their business, employees, and customers by providing prioritised recommendations for action to rectify problem areas and strengthen existing fire safety procedures. It ensures that the client complies with fire safety regulations for the protection of life, property, and the environment.

"We also work with you and your insurance broker or underwriter to address your fire risk based on the outcomes of the fire safety risk assessment report. It assists in preventing damage to property and products, loss of life, financial loss, consequential loss of profit, loss of productivity and insurance repercussions," concludes van Niekerk.

PUMPS, VALVES, PIPES & FITTINGS

Pumping solutions company appoints two more partners in Africa

VERDER Pumps South Africa, a market leader in advanced niche market and industrial pumping solutions, is pleased to confirm the addition of two new distribution partners that will see the company expand its footprint and network in Namibia and Kenya, furthering its ability to service more clients across sub-Saharan Africa (SSA).
 "Expanding our network of local facilities and distributor partners is an important part of our growth strategy and enables us to offer our wide range of innovative industrial pumping solutions and leading technological equipment to more customers across SSA," says Verder Pumps representative responsible for distribution management,

Reinhard Seidel. "Through careful selection and onboarding, we are confident these two new distribution partners have the core business offerings, footprint and potential customer base in the geographical areas that they service to bring not only our high-tech equipment into their markets, but our in-house service and maintenance for quality and performance assurance as well."
 The recently appointed distribution partners are Aqua Services & Engineering (ASE) in Namibia and Kubtech Engineering Services (KES) based in Nairobi Kenya with a clientele base and operations across East Africa (Kenya, Uganda and Rwanda). ASE is a recognised supplier and service partner in the

water and wastewater treatment, mining extractions, industrial and hospitality sectors in Namibia and KES specialises in process and automation, end-to-end project design and implementation, and procurement of related industrial supplies in a wide variety of industries and processes.



Reinhard Seidel

Both partners are an excellent fit for Verder's comprehensive, fit-for-purpose range of pumping solutions, that leverage the advantage of Verder Liquids' unwavering tradition of technical excellence and

innovations. The focus on developments and acquisitions led by our global Group ensures we can continuously grow our range of OEM pump products and solutions offerings to customers in African markets, the company says.
 "Furthermore, as a South African company, we are unwavering in our commitment to furthering the growth and development of local industries. Working with local partners who operate as regional and industry specialists is a key component of how we achieve this," Seidel adds.

ASE and KES join Verder's extensive distribution partner network, which includes Robday Mining Supplies for Rustenburg, Lydenburg and Steelpoort, Northfield Engineering for the Eastern Cape, and Tri-Pump Africa that operates in Zambia, Ghana, Tanzania and the Democratic Republic of Congo. This expanded network is meant to particularly benefit existing and new customers, over and above customers who are currently serviced from the company's headquarters in Johannesburg.
 "Our focus remains on the quality and performance of our pumping solutions and technical support services as an integrated offering to the market," concludes Seidel.



The key to efficient operations is keeping mill circuit pumps running

total cost of ownership. Koorts says, "This has seen the Warman mill circuit pump become the preferred choice across numerous plants in Africa."

Commenting further, Koorts says that the requisite support level often requires significant investment by the pump's original equipment manufacturer and means having the correct parts readily available on or close to a customer site.

"This should be backed by the technical competency required to keep the pump running," he says.

"What is essential to understand is that a mill circuit pump is not an off-the-shelf solution. Mill circuit pumps are engineered to provide optimum performance under the arduous operating conditions on individual customer sites and need to be configured to achieve the requisite hours between scheduled maintenance shutdowns," he says.

"Close collaboration with customers and a comprehensive understanding of the plant's operating parameters are crucial to ensure the solution provided will meet the operational requirements," he says.

One of the primary considerations when it comes to mill circuit pumps is the ability to handle large particles and high flow rates. Wear and tear in these pumps are directly proportional to the size of particles passing through, necessitating specific construction materials and design features.

Koorts says a major differentiator is that the Warman mill circuit pumps are physically larger for the same flow rate, reducing wear by operating at lower speeds.

This strategy has paid major dividends for customers and is one of the reasons for the popularity of the Warman brand in Africa.

"Another crucial aspect is the engineering of the hydraulic chamber, which enhances wear resistance and increases efficiency. This is achieved through the unique design of the vanelet which significantly minimises unwanted turbulence and reduces both wear and energy consumption," he explains.

The reduced energy consumption not only contributes to the bottom line but also ensures a relatively short payback period for the capital investment.

Rubber liners and alternatives

"Material selection for mill pumps often sparks debate, but experience in the field has shown the undeniable benefits of rubber liners," Koorts says. "Rubber liners extend wear life, handle impact associated with large particles, and are more cost effective and easier to handle." Recognising the advantages, Weir Minerals has made substantial investments in rubber production facilities to manufacture these liners for customers.

However, when applications demand it, a wide range of metal options are also available. Koorts says good examples would be Hyperchrome A61 alloy which is particularly good for fine particle wear that's often seen between the impeller and the throat bush, and Ultrachrome A05 alloy which would be used for the shell as it works well with general coarse particle abrasion.

"If the wear characteristics are higher than anticipated in an application, this is where the interchangeability of components plays an important role. Most of our designs allow for interchangeability between metal and rubber components based on specific wear characteristics."

Koorts also points out that over time, changes in the slurry composition or ore grade processed by a plant can affect pump efficiency and increase wear.

He says that Warman mill circuit pumps offer standard and low flow liner capabilities, enabling operators to adjust the flow rate as needed without compromising the original installation.

Retrofitment

Retrofit optimisations are increasingly common as mineral processing plants evolve and seek to reduce their total cost of ownership. Weir Minerals Africa has made substantial investments in an engineering team capable of seamlessly integrating the Warman mill circuit pumps into existing installations, and they work closely with engineering, procurement, construction management (EPCM) contractor, and project houses ensuring all stakeholders can make an informed decision regarding pump selection and configuration.

THE requisite levels of support are critical to ensure optimal performance of a mill circuit, as is the correct selection of the mill circuit pump. Attention to both these aspects will facilitate cost efficient and optimum operation of the circuit. "However," cautions general manager pump products at Weir Minerals Africa, Marnus Koorts, "each is as important as the other."
 Weir Minerals Africa has a focus on delivering reliable solutions to customers that will provide the required performance while facilitating the lowest

Dewatering pumps ready for harsh power station environment

INTEGRATED Pump Technology has successfully secured an order for three Faggiolati stainless submersible pumps to be deployed at one of the major coal-fired power stations located in Mpumalanga.

The order was made possible due to the company's understanding of dewatering applications and the ability to select the correct materials of construction to meet the application's exact requirements.

Key accounts manager at Integrated Pump Technology, Justin Bawden, says that the adaptability of the Faggiolati pumps allows the company to design units to suit specific application needs. This level of flexibility provides an added assurance that the pumps will meet the demanding operating parameters.

These 32 kW electrically driven 2 pole pumps will be deployed in dewatering applications at three different areas of the power station, all of which are noted to be extremely

corrosive. The pumps are expected to handle dense slurry including coarse and abrasive particles.

Bawden says the high chrome content selected for the wear parts is an important factor which will contribute to reliable performance over an extended period even under these arduous conditions.

"This strategic selection of materials of construction will likely extend the life of the wear parts increasing the time between replacement which will, in turn, lower the total cost of ownership for the power station."

These Faggiolati pumps are capable of dewatering at a flow rate of 186 cubic metres per hour at a shut off of 65 metre head. The pumps are equipped with multi-channel



stainless impellers, facilitating the movement of large volumes of slurry in this application.

Bawden explains the benefits of the multi-channel open rotor, pointing out its high hydraulic efficiency and self-cleaning blade profile. A specially designed adjustable suction flange with grooves aids in the expulsion of solids and fibrous materials, adding another layer of efficiency and durability to these pumps.

"As a company, we have extensive experience in specifying pumps for tough operating conditions, and are fully confident that this thorough understanding of application requirements as well as the strategic material selection will influence pump efficiency and lifespan," he concludes.



OPERATIONAL managers want to get the best value possible from their maintenance supplies. When it comes to steam boiler chemicals and other water treatment solutions, it might seem like the best value is based on the price per kilogram or litre of a can of chemicals. However, this is not always accurate because of how long chemical supplies last, and their ultimate cost also depends on the recommended dosing ratio.

Anelia Hough, water treatment consultant at Allmech, a leading South African manufacturer of boilers and supplier of water treatment components, says it's a mistake to only focus on the immediate price per can of chemicals and

to not consider the cost of the chemicals over time. "The cost of chemicals for a boiler over time depends on several factors, such as the type of boiler, the type of chemicals used, the frequency of use, and the amount of chemicals used (dosing rate per kilogram of steam)," she says.

Chemicals used for steam boilers include oxygen scavengers, phosphates, polymers and alkalinity builders/pH boosters. The cost of these chemicals varies depending on the quality, the type of chemical and the amount used. Effective chemical water treatment should prevent scale and corrosion in the feedwater, and steam condensation in the system and boiler.

The correct dosing ratio is important for several reasons. First, it ensures that the chemicals are being used effectively and efficiently. Using too little of a chemical can result in poor water quality and increased maintenance costs. In the same way, using too much of a chemical can result in over-treatment and increased operating costs.

Second, dosing ratios have a direct impact on the monthly running cost of a boiler. A chemical may be more expensive per can, but if it has a lower dosing ratio than an equivalent-

sized can that requires more of the chemical per litre to work effectively, the more expensive can is actually the cheaper option once the running costs are factored in.

Label guidance

Chemicals legally have to include their dosing information on their packaging, and using this information correctly is a key part of managing the overall cost of a particular chemical.

In an economic climate where everyone is having to carefully balance costs, it may not necessarily pay in the long term to buy what seems to be a lower priced can of chemicals – especially when the dosing rate is factored in.

Looking at the bigger picture

"It is important to note that the cost of chemicals is just one aspect to consider when assessing the costs of boiler maintenance. Other factors include enhanced operational performance, lower total operating costs, reducing the risk for downtime/technical issues, labour costs, equipment costs, downtime cost and energy costs," adds Hough.

Allmech recently helped a holiday resort that was struggling to get the right pH levels in the boilers heating its pool water and that had installed a demineralisation plant that it ultimately did not need.

"The customer operates two different size boilers for its operations. An 8-ton steam boiler for summer and a 10-ton steam boiler for winter. In essence, hot water is supplied to two sections of the holiday resort via heat exchangers – the open big pools and the indoor hot pools – that need a constant temperature of between 26 and 28°C," says Hough.

After assessing the setup, it was clear that the incorrect chemical water treatment was being used for the boilers. By solving the treatment issue, it became clear that the expensive-to-operate demineralisation plant was no longer necessary. In fact, the plant had been hindering the system by reducing the pH levels to concerningly low levels. Eliminating the need for the demineralisation plant and getting the right quality chemicals at the correct dosing rate for the boilers' maintenance saved the resort around R90 000 and over 171 000 litres of water each month.

Versatile amphibious pumps function in diverse applications

AMPHIBIOUS heavy-duty pumps like the Toyo VH range, available from IPR - the official southern African distributor for this range - are designed to operate effectively in challenging environments where versatility and durability are paramount. These robust pumps can function both above the water (dry) and under the water (submerged), making them an ideal solution for diverse applications across the mining, oil and gas, construction and agricultural sectors.

In the mining industry, these pumps play a crucial role in dewatering - the removal of water infiltrating open pit and underground mines. Their capability to handle heavy and abrasive slurries is also instrumental in the construction sector, particularly in dewatering building sites and during tunnel construction. They can operate either partially or completely submerged. Notably, a compact version with an inline outlet discharge is beneficial in tunnelling works where space is a limitation.

Business development manager at IPR, Ruan Venter, says the usefulness of the Toyo VH amphibious pump extends to envi-

ronmental clean-up and remediation efforts, where these units will effectively and efficiently pump out contaminated groundwater or surface water, even when the water is laden with solids or sediment.

"In wastewater treatment facilities, Toyo VH pumps handle sludge and other dense materials, while in the agricultural industry, these amphibious pumps are key in irrigation and drainage systems, especially in flood-prone areas. Their ability to function both submerged and above water is crucial in maintaining optimal growing conditions by controlling water levels in fields."

The industrial sector also heavily relies on these pumps' versatility. They are used in processing plants across industries such as food processing, chemical and petroleum, where they handle slurries. Their robust construction allows them to manage corrosive and abrasive fluids, solidifying them as a reliable choice for demanding industrial environments.

Constructed with a unique design and incorporating a semi-open impeller, ample passageways for solids, heavy-duty shaft and bearing



configuration and double mechanical seals operating in an oil bath, the Toyo VH pumps are primed for demanding tasks. They can function as priming or booster pumps and are installed on a frame with a strainer or with a fixing cone, with or without an agitator. Models from the Toyo VH15 and larger come equipped with an adjustable wear plate to optimise hydraulic efficiency.

These pumps can manage slurries with densities of at least 1.25kg/dm³ and solid contents up to 55% by weight. They can handle solid particles up to 80mm in diameter and liquid temperatures up to 60°C with pH levels between 4 and 14.

Venter explains that one of the most important advantages is that the Toyo VH range features a unique agitator design that lifts sediment into suspension.

Energy-efficient bearing installation

The SKF TMBH 5, one of the smallest, most portable induction heaters on the market, incorporates cutting-edge technology and design features to heat roller bearings weighing up to 5kg that are mounted onto a shaft with an interference fit. Also suitable for heating other ring-shaped, metallic components, this versatile unit is designed for use during the service and maintenance of gearboxes, pumps, fans and blowers.

The TMBH 5 applies advanced medium-frequency electronics to generate a temperature difference between the bearing and the shaft. The heat causes the bearing to expand which serves to facilitate the installation process as there is no need to use force to fit the bearing.

The Bearing

Heater relies on an induction clamp that contains internal coils. A current in the coils



generates a fluctuating magnetic field which induces currents within the component that are converted to heat. SKF product manager – MaPro, Eddie Martens, points out that this process is highly energy-efficient because the heat is generated within the component and not in the clamp.

The bearing heater provides a choice of power settings which can be selected on the unit's intuitive LED interface: Temperature Mode enables the operator to choose the desired bearing temperature and by selecting the Time Mode, a bearing or component can be heated for a specified length of time. The device also monitors the temperature automatically. "The power regulation function (40 to 200°C) allows for sensitive components such as bearings with shields or metallic inserts in the seals to be heated more slowly if required," adds Martens.

Due to the thin fingers of the induction clamp, the operator does not need to select a different yoke for each component which increases the number of different components that can be heated. This subsequently reduces the number of accessories needed, driving down costs.

As the medium-frequency technology that heats the components operates so silently, an LED indicator has been incorporated into the user-friendly control panel to alert the operator when the heater is in operation.

Weighing only 3kg, the portable TMBH 5 offers a light, compact bearing heating solution. The unit owes its lightweight to the sophisticated medium-frequency technology and the use of appropriate manufacturing materials. A built-in handle further adds to the portability of the bearing heater. Conveniently fitted with storage pockets for ancillary equipment, the TMBH 5 is versatile enough to be used in a variety of locations such as on the factory floor, at a workbench or out in the field and it can be easily stored in small spaces like the boot of a car.

xylem
Let's Solve Water

CREATING FULL-CIRCLE SOLUTIONS FOR YOUR BUSINESS

As the world's largest pure-play water technology company, Xylem is driven by its mission to solve water. We strive to realise water's economic and social benefits for everyone, finding solutions for declining supplies, inefficient infrastructure, contaminated resources, and unpredictable weather.

Xylem is a customer-centric organisation. Water is essential to everyone, and our life's work is water. Hence we leverage our global scale and local insights to give Xylem's customers the best solutions that will continue to deliver value.

We maintain a singular focus on preserving and improving this valuable resource. This gives us great agility to pursue innovative growth opportunities that dovetail with the needs of our customers and their communities. Xylem's growth orientation is inclusive and supportive, just as water is.



Find out how we can solve water together.

Tech for tanks sees what users can't

EVER since Jan Joubert, founder of JoJo, cooked plastic in his farm kitchen to pioneer rotomoulding of large plastic containers, JoJo has had a history of innovation. Forty years later, JoJo still aims to be at the forefront of development that brings affordable solutions for domestic, agricultural and commercial water problems.

In September, South Africa's largest water tank manufacturer, JoJo Tanks, which has proactively added to its range of products as a holistic water solutions company, launched a remote water monitoring Smartphone application – JoJo

Monitor. The application is available on the Apple and Android store.

In partnership with a local engineering company, JoJo has spent four years developing a remote water monitoring Smartphone application and three IOT devices. JoJo IoT devices can monitor tank levels, measure water consumption, and detect water in places where water ponding might occur.

The JoJo Monitor application has an easy-to-use interface, which allows for user-defined alerts and set-up, using Bluetooth for the initial activation and testing, and live readings or real-time monitoring

when within proximity of the device. Remote monitoring is carried out via the Sigfox network. Each device comes with a free 12-month subscription to Sigfox. Information can be shared amongst several users.

The JoJo tank level

The JoJo tank level is the first of the three devices that will be launched. The tank level uses radar, which makes the reading more accurate than ultrasound as it does not pick up the sides of the tank. "Put simply, remote level monitors allow the user to manage what they

can't see, namely the levels of water inside their tanks," says executive of sales and marketing for JoJo, Sebasti Badenhorst.

"The JoJo tank level device is easy to use and install on top of the tank. It is designed to be flexible so that it can be used in most applications, or employed in scalable solutions to incorporate a collection of tanks. While it comes calibrated for the range of JoJo vertical, slimline and horizontal tanks and also allows for interconnected tanks, the configuration can be customised for any tank," says Badenhorst.

The app can be downloaded

directly from the app store and is compatible with iOS, Google Play and Android platforms. The device is, like the JoJo Tank, developed in South Africa by JoJo and is supported by a local call centre.



Updated rotary vane vacuum pump hits the market

THE proven R5 RA from Busch now comes in an improved version with a completely redesigned interior. The new vacuum pump is 25% more energy efficient than its predecessor, thanks to the optimized compression ratio, pump stage dimensions, and oil discharge path.

It is also available with Ecotorque, the Busch variable speed drive (VSD), that enables

the pumping speed to be adapted to the exact requirements of any process. As a result, additional energy savings of up to 50% and a 20% increase in pumping speed can be achieved.

The accessory extends the



supply voltage range supported by the vacuum pump, making it suitable for use in almost all countries around the world. This compact and cost-effective solution is also available as a retrofit kit.

Compared to the previous generation, the R5 RA 0520 A has a 20% smaller footprint, is 25% lower in height, and the absence of external piping improves leak tight-

ness. The compact and hygienic design features surfaces that repel water and dirt.

The total number of spare parts has been reduced by 40%, making maintenance fast and efficient, with all service-related parts located on one side. Heat emissions have also been decreased through an improved cooling system that combines optimal pump operating temperature with compact construction.

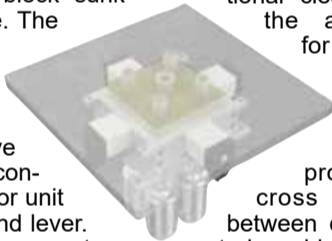
The new vacuum pump is made

for continuous operation in the rough vacuum range with vacuum levels down to 0.1 hPa (mbar). Field tests were successfully carried out to validate performance and reliability.

The R5 RA 0520 A and the R5 RA 0520 A Ecotorque set a new standard in vacuum technology. The pumps are suitable for various applications in vacuum packaging, food and plastics processing, and many other industries.

New solution for connecting multi-port valve blocks

IT is now possible to control the pneumatic locking of the valve block via locking cylinders thanks to a valve block sunk into the skid surface. The second solution consists of using a valve block placed onto the skid surface, where the valve body is manually connected to the actuator unit via a detachable hand lever. This second type offers greater flexibility for the spigot layout. The connection between the actuator and the diaphragms welded onto the valve block is created reliably within a few seconds using the familiar clamping principle of the GEMÜ SU40 Sumondo. The blocks themselves are produced by machining and can therefore be tailored to each specific application.



There are several benefits to using single-use technology: Eliminating the need for conventional cleaning cycles and the associated costs for power, cleaning media, waste disposal and peripherals while increasing protection against cross contamination between different manufacturing drives. It also minimises downtimes in factories, which significantly improves the flexibility and effectiveness of single-use solutions in the medical and pharmaceutical technology sectors in comparison with conventional solutions. In addition, the use of single-use technology reduces negative environmental effects by eliminating energy-intensive cleaning cycles.

Find the right dewatering pump

CHOOSING suitable tools for a dewatering project starts with asking the right questions, according to product manager at dewatering pump specialist IPR, Steve du Toit.

The company – previously known as Integrated Pump Rental – was recently appointed master dealer in Southern Africa for dewatering pumps from the leading pump brand Atlas Copco. Du Toit argues that a good first question when planning a dewatering project should relate to the nature of the fluid to be pumped.



"You need to know the weight of the fluid, so that the pump has enough power to draw the liquid through," he says. "In many cases, we find different fluid types on the same construction, quarrying or mining site; sludge, construction materials and other insoluble materials must often be pumped along with the fluid."

These materials can range in size from particulates to solids of up to four inches. Heavy slurry demands a particular kind of pump, for instance, so to try and pump it using a centrifugal trash pump will only end in severe damage to the equipment.

"The pH level in the fluid is also essential to understand, as this indicates how acidic the liquid is," he explains. "The further the fluid deviates from the neutral – which is seven on the pH scale of zero to 14 – the more chemical impact the fluid will have on the pump's internal components."

Du Toit notes that the pump internals must be constructed of the appropriate material to be resistant to fluids with high acidic or base characteristics. Other important questions to ask are about the site itself. Is it readily accessible, for example, and is there electric power available?

"Most dewatering pumps are trailer-mounted or skid-mounted," he says. "A trailer-mounted pump system is easy to transport but may take up additional space on the jobsite. Also, if there is not a power source nearby, an electric pump will not suit your needs and will require a diesel-powered solution."

If there is elevation to deal with, then fluid may have to be pumped uphill. The distance to be pumped will, of course, be a factor to consider.

EFFICIENT AND CLEAN SOLUTIONS FOR THE COMPLETE WATER CYCLE.



Efficient and innovative: Pumps and Valves from KSB

Water means life. KSB provides reliable and efficient systems for extracting and transporting water and disposing of waste water around the world. KSB helps ensure that people have access to water wherever they are.

Our team of expert engineers have years of experience delivering complex water and waste water turnkey solutions. Find out more about KSB and our efficient solutions now. www.ksb.com/en-za

KSB Pumps and Valves (Pty) Ltd

Tel: +27-11-876-5600

www.ksb.com/en-za

Level 1 B-BBEE Supplier



COMPANY & PRODUCT NEWS

Gqeberha sterile manufacturing facility wins insulin contract

THE local subsidiary, Aspen SA Operations and Aspen Pharmacare Holdings have concluded an agreement with the leading global manufacturer of human insulin, Novo Nordisk, for the technical transfer and commercial manufacture of human insulins.

The collaboration allows for local production of human insulin in South Africa, to cater to the needs of people with diabetes on the African continent.

Through the local conversion of the insulin into finished dose form vials by Aspen, the companies will leverage opportunities together, to ensure a reliable supply of products to populations that need it. The collaboration aims to supply over 1 million patients (16 mil-



lion vials) in 2024 with further upscaling to over 4 million patients in 2026.

Aspen will manufacture these vials at its existing sterile facility in Gqeberha. The Group

invested R6 billion in building these facilities and related technologies. The production of insulin will utilise the sterile infrastructure including some utilised for Covid-19 vaccine production. Aspen will deploy approximately 250 people for this production which is due to commence at the beginning of 2024.

The collaboration will also reduce the transport-related carbon footprint by 68%.

Aspen group chief executive, Stephen Saad (pictured), said, "Aspen has a clear objective and focus to capacitate Africa and give quality affordable access to critical medicines from sites based in Africa that are also capable of exporting to global markets. We are proud to be associated and working with Novo Nordisk,

a global leader in many areas including diabetic insulins.

We hope to build off this initial foundation with Novo Nordisk to further expand access. In addition, this development is important to retaining critical skills and developing new talent on the continent and to diversifying global supply chains to ensure security of supply and improved patient access.

To this end, the technical and skills transfer agreement is key and an endorsement of Africa's role in the regional and global pharmaceutical supply chain. We thank Novo Nordisk for this demonstration of their confidence in Aspen, together we can positively impact the millions of patients most in need."

Citrus transformation programme presents a 'good example'

AGRICULTURE is a capital-intensive activity, typically with years passing between initial investment and revenue. The primary challenge facing small scale farmers is access to reasonably priced, reasonably termed funding to drive capital investment in their enterprises.

The Economic Transformation of Black Citrus Growers (ETBCG) programme began with a proposal by the Citrus Growers Association (CGA) to the Jobs Fund - a National Treasury initiative addressing the challenge of unemployment in South Africa.

The purpose of the ETBCG programme was to create a model that would provide blended financing at favourable interest rates and payment terms to support orchard establishment, infrastructure development, capital equipment, and skills development. Ultimately, the goal was to create jobs and increase the number of hectares under black-grower management, and black growers' share of domestic and

international markets.

To achieve this, a programme was initiated to bring together like-minded public, private and civil-sector organisations. A key driver of the project was the Citrus Growers Association (CGA), a non-profit industry body that represents the interests of the producers of export citrus, with assistance from the CGA's subsidiaries, the Grower Development Company and the Citrus Academy.

The ETBCG programme soon attracted other partners, notably the Department of Agriculture, Land Reform & Rural Development (DALRRD) who, along with the Jobs Fund, CGA itself, committed to providing grant and loan funding to the programme. AgriSETA came on board to fund the skills development component, and the LIMA Rural Development Foundation was engaged as project manager. Finally, FNB was engaged after a tender process to identify the most suitable commercial funding partner.

Pursuing a like-minded goal

Development finance manager at the Jobs Fund, Evelyn George, said, "The power of this programme emerges from assembling like-minded partners with a clear end goal in mind. The success of the ETBCG, in our view, has been largely a result of the fact that multiple stakeholders have been able to come together and create an innovative structure that involves a commitment to long-term, mutual benefit, that shares risk, and that ultimately supports the concrete transformation of the industry."

Applications for funding from the programme opened in 2019. Applicants were selected from amongst emerging citrus growers around South Africa, in particular growers who were already actively farming citrus, and who were exporting or on the verge of exporting at the time of application.

Enterprises were selected for inclusion based on their viability, potential employment, transformation and economic impact, and growth potential.

With the partners and beneficiaries in place, the programme was set to launch in 2020, but two factors immediately disrupted planning.

The first was the Covid-19 pandemic, which hampered engagement between stakeholders, especially the in-person training initiatives that had been planned. The second factor was the significantly altered economic and industry landscape facing citrus growers. In 2019 the industry was experiencing a boom, with strong harvests and exports. Over the next few years, the breakdown in international supply chains and economic headwinds in South Africa had impacted profitability, a trend which increased acutely in the wake of the conflict in Ukraine, which saw fertiliser costs increased by almost 300%.

Group financial manager at the CGA, Robert Miller, said, "It was a series of punches that we had to roll with. The fact that we were able to do so, speaks to the effectiveness of the partnerships we'd forged, and the commitment of all partners to the long-term success of the project. Our skills-development partners, FNB and the Jobs Fund were flexible in the face of changing conditions, and able to adjust their goals and outcomes in line with the dynamics playing out in the industry."

Innovative funding

The key innovation of the ETBCG programme was the funding structure, which is split almost equally between grant and commercial funding. Farmers receive 36% of their funding as a pure grant (contributed from the CGA, DALRRD and Jobs Fund), which is seen as an equity contribution, thereby reducing debt levels and enhancing their ability to make repayments. The remaining 64% is structured as a blended loan at reduced interest rates from the Jobs Fund, CGA and FNB. The result is that the farmers ultimately receive a blended loan at lower-than-prime rates. The contribution from the CGA comes from industry levies, of which 20% is ring-fenced for transformation programmes.

Business development head at FNB, Gert Breet, said, "The ETBCG programme unlocks grant access which is then matched with subsidised commercial funding in an innovative structure with great benefits for beneficiaries. The grant component completely changes the calculation for up-and-coming farmers. It is a



massively substantial leg up in what is usually a prohibitively capital-intensive industry. The benefits are not just that the cost of capital is lowered, but that it's patient capital, extended by people who understand the dynamics of the industry and who know that the risk is shared amongst our partners."

Miller further adds, "We've been careful to keep the focus on enhancement as well as expansion, on sustainability as well as growth. This has informed both our focus on skills development and long-term support and the use of, for example, solar power in the capital investments the farmers have made."

Skills development

Skills development was identified as a critical component of the ETBCG programme. It was important to develop the internal capacity of beneficiaries and make them less reliant on external technical specialists but also to develop skills in surrounding communities so that as the farms grew and their demand for labour increased there were people available who had training in citrus farming. AgriSETA invested R13 million in training, and the involvement of the CGA ensured there was good technical knowledge and support on the ground.

2023 marked the third year of ETBCG implementation. The programme has an established track record and is beginning to reach maturity. As of June 30, 2023, over R161 million in funding had been approved. Two hundred and eight hectares of new orchards have been planted and an additional 362 hectares are being supported for working capital. Furthermore, 78 new permanent jobs and nearly 625 seasonal jobs have been created. Five hundred and seventy-seven individuals have also been trained through skills development, learnerships and tertiary education bursaries.

Disbursed funds were used toward access roads, land preparation, irrigation infrastructure, farm equipment, vehicles, fencing, pack-house equipment, a de-greening room, generators, a solar system, and a substation.

But this is just the beginning. Citrus is a long-term crop, and the number of jobs created is expected to peak well after the ETBCG lifetime is completed, as orchards come into production and the returns on capital investment are realised. The deployment of funds is expected to continue until March 2024, at which point a monitoring period will extend for another two years.

George concluded, "We wanted to demonstrate that with the right kind of support measures, funders, and implementers this type of mutually beneficial framework is possible. All the ingredients came together for an impactful and symbiotic partnership. We would love for the success of this project to catalyse investment in other agricultural sectors. It's a great example of how these partnerships can work when the transformation of the industry is the main driving force."

POWERFUL ALL-ROUNDER



IIoT controller for the control cabinet

- 2-in-1: cloud connector and powerful controller
- Perfect IO-Link integration
- Plug & Work access to the I/O level via Ethernet
- Can be mounted on the DIN rail in different orientations
- Powerful technology for demanding applications



www.ifm.com/za

ifm - close to you!



Keeping dairies' energy mixes and products 'the cream of the crop'

As energy plays a large and very critical role in dairy processing, this sector places a significant emphasis on energy efficiency and cost management to ensure that essential dairy goods are delivered to consumers as quickly and cost-effectively as possible.

Leading South African operations and maintenance service provider to the steam and boiler sector, Associated Energy Services (AES), has a critical role to play in supporting and assisting the dairy industry to be as efficient and sustainable as possible, says AES commercial director, Dennis Williams.

Williams points out that service level agreements (SLAs) between major dairy producers and AES clearly stipulate key deliverables which are central to enabling this vital industry to fully realise the high expectations that it places on processing equipment and facilities – regarding throughput, efficiencies and effectiveness.

Steam support for seasonality

As part of its dedication to closely partnering with a wide portfolio of key vertical industries, AES has a keen understanding of the many challenges faced by dairy manufacturers. One such challenge – which has to be consistently and closely monitored – is seasonality.

"AES's role is to ensure that there is no failure in the steam supply during peak periods when the energy plant is running at maximum capacity. As suppliers of steam, we need to ensure that the plant is well

maintained and that any standby plant is ready to continue the steam supply at a moment's notice, as the manufacturer cannot afford to be unable to process peak seasonal milk flows which it receives daily," Williams says.

Seasonality also impacts planned maintenance. Milk has a very short shelf life, and wastage of milk which has already been purchased from farmers – and cannot be processed – increases production costs.

Safe, clean steam

A third challenge which AES faces on behalf of dairy producers is the need for quality steam that is safe and hygienic.

"This requires carefully considered water treatment that relies on the use of food-grade chemicals. Temperature too is critical, especially when it comes to pasteurisation. Dairy processing requires constant steam pressure, to ensure that equipment such as spray driers can operate efficiently on an ongoing basis," Williams advises.

In addition to meeting stringent specifications set out in each SLA, AES also provides its remote monitoring system (RMS) which enables dairy clients to monitor temperatures and pressure flows.

Steam updates via RMS

"In this way, clients can see what is happening on our side of the fence with regards to the steam control parameters," he notes.

"Our SLA specifically addresses



steam pressure requirements, as this is a good indication in terms of the dryness fraction – and, specifically, the temperature of the steam. This then becomes the main control input into the client's process. Furthermore, if clients are getting the right control inputs, they will potentially put components such as pressure-reducing stations in place. This ensures that steam pressure is in the control range of the pasteurisers and the other equipment they are using," he explains.

Williams furthermore notes that the client's steam requirements and tolerances depend on the sophistication of the energy plant in use, and also on the specific products being manufactured at different dairies.

While some larger operations are state-of-the-art and have many product lines, there are also some dairies which are just focused on keeping less sophisticated equipment operational – with a smaller product range – in the hope of expansion.

"A dairy that is only producing milk will have different requirements to

a facility that is producing cheeses and yoghurts. In addition, the state of technology and continuous improvement practices will depend on the plant itself. One may find a traditional dairy using very basic technology in contrast to a dairy that is on the cutting edge in terms of its processes and energy operations. So, when one considers integrating energy streams across this broad spectrum, there are a number of different requirements which makes this process really interesting," he says.

Closely aligned with this is sustainability. Williams says some top dairies are taking this extremely seriously, in response to pressure from high-profile retail clients such as Woolworths and Spar.

Sustainable, 'greener' dairies

"Up until fairly recently, most have operated coal boilers or relied on less environmentally-friendly fuels such as heavy furnace oil, which has a high sulphur content. AES constantly monitors technology trends, together with the quality and availability of alternative fuel sources – such as biomass and biogas – to support dairy clients which are looking to use different fuels to minimise their carbon footprints."

To this end, a major dairy in the Eastern Cape recently installed a second boiler fuelled by biomass. AES has assisted operationally to identify areas which may require adjustment to ensure efficiency and reliability. AES operates the steam plant at this dairy including a boiler

that uses biogas harvested from its wastewater.

AES has also provided site-based expertise, employing an additional millwright to facilitate the generation of ultra-clean steam needed in some of this dairy's highly specialised production processes.

Asset care – and communications

Whether working on specific projects or operating on-site 24/7, Williams says it is extremely important for AES to forge strong relationships with its dairy clients through good communication to mitigate daily or weekly problems or even assist with product trials.

Also central to this relationship is taking care of a client's plant and equipment.

"We need to make sure that our clients' assets are well maintained because they are expensive and also mission-critical. Further to this – and very importantly – pressure vessels are potentially very dangerous, so we need to make sure that we operate them according to the most stringent safety regulations at all times.

"Skilled asset management is an important part of what we do, so that when it is peak season for our dairy clients, their energy plants and processing lines are in optimal condition – with minimal likelihood of an outage or downtime". We also operate efficiently so that we are not impacting negatively on the carbon footprint of the site or using excessive amounts of fuel," Williams concludes.

Opinion: How power plant OEMs can help address SA's electricity crisis

BY THAVA GOVENDER, CEO OF BABCOCK'S ENGINEERING BUSINESS,

As the South African government mulls over ways to improve the performance of Eskom's coal-fired power stations, collaborating with power plant original equipment manufacturers (OEMs) may be the answer to optimising power generation and ultimately putting an end to loadshedding.

CEO of Babcock's engineering business, Thava Govender, says long-term partnerships with power plant OEMs may be the much-needed solution to addressing the electricity crisis and stabilising the grid.

That the lack of reliable electricity supply is one of the biggest economic constraints in South Africa is no overstatement. To provide context, record levels of loadshedding were experienced in 2022, with 207 days of blackouts recorded during the year, compared with 75 days in 2021. This has had a devastating impact on businesses and the economy at large.

As part of government's efforts to solve the electricity crisis and end loadshedding, National Treasury proposed a total debt-relief arrangement for Eskom of R254-billion during the 2023 budget speech. However, the arrangement came with strict conditions to safeguard public funds. One of the conditions was that Eskom would implement the recommendations of an independent assessment of its operations, which was commissioned by National Treasury.

In February 2023, National Treasury announced that it had appointed the German VGBE Energy Consortium to assess and investigate the operations of Eskom's coal fleet. The outcome of the assessment, which was concluded in July this year, will consider a concession model which could see OEMs playing a central role in turning around and improving the energy

availability factor (EAF) and performance of Eskom coal-fired power plants.

Why OEMs?

According to Govender, it is important to note that the root cause of the current electricity crisis in the country is the lack of sustainable maintenance, not insufficient energy capacity, as is mostly purported. While South Africa's coal fleet has a 51% EAF, many plants globally of the same age are operating at a much higher EAF of over

85%. Currently, says Govender, 80% of unavailable power is due to inadequate attention, with only 20% of the power stations on planned maintenance.

Over the years, a lack of proactive engagement with OEMs has hampered determination, definition and optimisation of a detailed maintenance scope. The devaluing of OEM support has therefore impacted their ability to effectively support Eskom. One of the reasons for disregarding OEM engineering services is the perception that OEMs are expensive.

The truth of the matter, stresses Govender, is that OEMs are not expensive – they offer a premium service which, of course, calls for a significant initial capital investment, which is in fact outweighed by the substantial return on investment through a much higher EAF over the lifecycle of the power plants. The comprehensive lifecycle support capabilities are made possible by the OEMs' strong skills base, which is a big overhead cost they have to carry and have invested in over the years.

To remedy the current power crisis, Govender believes that power plant OEMs have an important role to play. By their nature, OEMs offer end-to-end services – designing, supplying, operating, manufacturing, constructing, commissioning, maintaining and

guaranteeing the long-term performance of the critical boilers, turbines and generators, amongst other critical components of the power plants that they supply.

Deteriorating coal quality

One of the sustainable ways of reviving Eskom's coal fleet is through the refurbishment of the power stations – restoring the plants to their near original state. According to Govender, most of the power stations were built decades ago and were designed for a certain coal quality available at the time.

With coal quality deteriorating over the years, OEMs – leveraging their access to new technologies, local expertise and global best practices – have the ability to upgrade the necessary components such as boilers and turbines to allow the old power stations to operate at peak performance using the new grade of coal available.

However, stresses Govender, these changes require time to assess and correct, especially given that there have been some undocumented modifications to the power stations over the years.

"OEMs bring a lot to the table in the quest to finding a lasting solution to the incessant loadshedding," says Govender. "They possess a comprehensive understanding, drawings and design performance parameters of the power stations. With their access to developing technologies, they will definitely improve the performance of the coal fleet."

The other key benefit of engaging OEMs is that they offer the necessary spare parts needed to keep these power stations running at peak performance. "At Babcock, for example, we manufacture a fair majority of the parts for our boilers locally. OEM parts guarantee an exact replacement of what was originally included on the boilers, for example. This, in my view, is incredibly important and worth any cost that comes with it."

Babcock's value proposition

As one of the leading boiler manufacturers, Babcock has a long track record spanning some 130 years in South Africa, with an extensive installed base of over

1,500 boilers during that period. In fact, the company has been involved in the construction and 1,500 of some of the flagship coal-fired power stations in the country.



AIR PRODUCTS



SUPPLYING INDUSTRIAL AND SPECIALTY GAS PRODUCTS TO THE SOUTHERN AFRICAN REGION

www.airproducts.co.za



Decoding the world of DPM with game-changing scanner

DIRECT part marks (DPM) are an intricate language of industry – codes, symbols, and text etched or printed directly onto parts, defying the limitations of labels. Often taking the form of Data Matrix or QR codes, DPMs play an important role in traceability across various sectors, particularly in the automotive and electronics manufacturing industries.

The selling point of DPM codes lies in their permanence, as it is a permanent mark that resists removal, obscuring, or damage. Their usefulness comes to the forefront where traditional labels fail – on textured surfaces that reject adhesion or miniature parts where labels fail to find footing. Their beauty lies in the fact that they are permanent, and they endure as long as the parts themselves, embracing the principle of “cradle-to-grave” traceability.

Beneath their charm, lies the challenge. Unlike their bold counterparts, the traditional black barcodes on white backgrounds, DPM codes dance in low contrast, etched into the very core of the part. With DPM codes various variables can affect readability, how they appear and

then of course, the surface they appear on.

DPM codes etched onto curved or uneven surfaces gleam with reflections that confuse barcode readers. The surfaces they are placed on are most often riddled with imperfections – granules, stripes and streaks, each adding a layer of complexity to their deciphering and reading. It's exactly here that the brilliance of the new imager-based Omron V450-H reader steps in, using algorithms created for decoding DPM codes reliably. In this dance of shadows, low-angle lighting and vivid LEDs choreograph the perfect contrast, a spectacle that elevates code visibility.

In this intricate tapestry of industry, DPMs are the woven threads that connect the past, present, and future. As we seek permanence in traceability, we unravel these codes that can stand the test of time, tracing the lineage of every part. It's a quest that beckons technology to decode the imperfect, the imprinted, the permanent – the silent storytellers of the industrial landscape.

Omron's latest breakthrough is the V450-H ultra-rugged handheld scan-

ner. Tailored specifically for industrial direct part mark (DPM) reading, this innovative device sets new industry standards for durability and performance. With a focus on reliability and ease of use, the V450-H is poised to revolutionize DPM scanning across various sectors.

The new scanner introduces a cutting-edge solution designed from the ground up to tackle the challenges of industrial direct part mark reading. With its advanced x-mode decoding algorithms, the scanner ensures consistent readability of even the most damaged, distorted, or complex directly marked codes, achieving remarkable decode rates. The out-of-the-box performance of the V450-H eliminates the need for extensive setup in most applications, providing users with unparalleled convenience.

For more intricate scanning tasks, the new scanner offers the WebLinkPC user interface, a user-friendly and intuitive configuration tool. This interface streamlines the setup process, making it effortless to optimise the scanner for challenging applications.

Whether it's high-density codes or specialised requirements, the new scanner adapts easily.

Equipped with an IP65-sealed charging station, the V450-H guarantees seamless data transmission and reception over Bluetooth within an impressive range of up to 100 meters. The cordless scanner boasts an exceptional capacity of over 50,000 scans per full charge, enhanced by the onboard battery gauge that optimises operational efficiency. This high level of connectivity and endurance ensures uninterrupted productivity in demanding environments.

In the realm of industrial environments, the V450-H's robust housing is engineered to endure the harshest conditions, including 2.45m drops and exposure to a variety of industrial fluids and chemicals, such as motor oil and brake fluid. Meeting the IEC-60068-2-31 drop-and-tumble standard and the ISO-16750-5 chemical resistance standard, the V450-H is purpose-built to thrive in the most challenging manufacturing settings.



The versatility of the Omron V450-H DPM handheld scanner across numerous sectors, including manufacturing, logistics, and automotive. Its ability to decode even the toughest direct part-marked codes, combined with its rugged design, empowers industries to achieve enhanced efficiency and reliability in their processes.

The Omron V450-H ultra-rugged handheld scanner represents a milestone in industrial DPM reading. With its cutting-edge technology, durability, and user-friendly design, this innovation is set to reshape the landscape of direct part mark scanning. Omron's commitment to pushing boundaries in automation technology is evident in the new scanner, which will undoubtedly become an indispensable tool across various industries.

Opinion: Optimising energy transformation for the aggregation and control of DERs with VPPs

BY DWIBIN THOMAS,
CLUSTER AUTOMATION LEADER
AND NISHANDRA BAIJNATH,
SYSTEMS ARCHITECT, POWER
SYSTEMS, ANGLOPHONE AFRICA
AT SCHNEIDER ELECTRIC

THE rapid growth of DERs (distributed energy resources) which include solar PV, wind turbines, and energy storage systems, has fundamentally changed the energy landscape. However, the variability and uncertainty of DERs can pose significant challenges to utilities responsible for the distribution or transmission of energy.

The effective management of these resources requires sophis-

ticated control systems that can balance supply and demand in real time, ensuring grid stability and reliability whilst optimising asset performance.

Enter virtual power plants (VPPs), which can play an important part in establishing a grid that offers stable and reliable supply. Aggregating and controlling DERs with a VPP offers several benefits to utilities:

Efficient management – DERs are difficult to control individually due to their decentralised nature. By aggregating these resources, VPPs create a single, controllable entity that can be dispatched as and when needed, based on energy demand.

Optimised usage – VPPs can forecast the renewable output and DER capacity of assets which assist utilities in making informed decisions about asset dispatch, considering factors such as weather patterns and market conditions.

Cost savings – by aggregating and managing DERs, VPPs mitigate the need for expensive upgrades to existing infrastructure whilst increasing the efficiency of energy distribution. This can result in lower energy costs for consumers and more reliable energy supply for utilities.

It offers performance asset management, forecast management, monitoring and alerting, market process management, asset dispatch management, analysis, and reporting functions.

By providing accurate forecasting, VPPs enable utilities to effectively plan for the availability and variability of DER resources.

This, in turn, allows for the comparison of forecast results with previous versions and enables the tracking of changes in forecast accuracy. Forecast versioning also enables the VPP to maintain a historical record of forecast results, which can be used for analysis and reporting purposes.

VPPs can manage and compare forecasts from multiple sources, such as weather providers to provide the most accurate and reliable forecast possible. By comparing forecasts from different sources, VPPs can identify discrepancies and adjust their forecast accordingly to ensure the most accurate prediction of DER output.

technology has been successfully implemented at a California-based utility company. This technology is used to aggregate and manage DERs, including residential hybrid inverters, solar panels, and battery storage systems. Optimisation of the generation and energy storage based on time of day and state of charge allows for optimal coordination of the DERs to balance the supply and demand of the electricity on the grid.

The VPP provides real-time monitoring and control, as well as demand response capabilities, resulting in improved grid stability and customer satisfaction.

As another example, AutoGrid VPP technology is used to manage DERs, including wind turbines and solar panels, at a large industrial park in Germany. The VPP offers energy cost savings and grid reliability improvements, as well as reduced greenhouse gas emissions by more than 2,000 tons.

The crystal ball

VPPs can provide forecasting of DER resources such as solar or

VPPs in action

Schneider Electric's AutoGrid VPP

Three new lubricant products launched at auto show

THE world's largest independent supplier of innovative lubricant solutions, covering almost every industry and application, Fuchs Lubricants South Africa, launched three new products at Automechanika Johannesburg earlier this month.

The Fuchs' stand featured a fully functioning half-cut engine and a half gearbox cutout so visitors could see the company's wide range of products in action.

"It is a great practical demonstration of all our products and is actually what we use for customer and staff training," comments Sales Director Andrew Cowling.

Co-located with Futuroad Expo, Automechanika Johannesburg is sub-Saharan Africa's leading professional event for the truck, bus, and commercial vehicle industry.

"On the passenger side, we focus on both workshops and retail outlets. On the commercial vehicle side, we also cater for trucks and buses," explains Cowling.

Apart from the new products launched at Automechanika, Fuchs highlighted its extensive range for diverse applications and industries.

"We have a vast product range. One of our key selling points is that we have a product for all applications. It is what attracts customers to us. In terms of the new products, these are general upgrades and a reintroduction of our existing portfolio," highlights Cowling.

Titan GT1 Flex C23 is an upgrade of Titan GT1 Flex 23 that offers substantial fuel economy characteristics for hybrid vehicles in particular.

However, apart from this specific application, it is applicable to 75% of the car parks in South Africa. "It is an exceptional product and a big seller, so this upgrade is just enhancing its approvals and giving it a wider scope than it had before," says Cowling.

The former includes American Petroleum Institute (API) SP certification, representing the highest quality and technical standard that a manufacturer like Fuchs can achieve. "Adding the API SP accreditation to

the product is a great selling point that will make it attractive to an even wider range of vehicle types and uses," says Cowling.

Titan Cargo Maxx II is an upgrade of Titan Cargo Maxx with benefits such as increased fuel economy and extended drain intervals. A staple of the Fuchs' range for over a decade, it now also has an upgraded approval matrix and enhanced performance. "We really want to highlight it as our premium heavy-duty engine oil," stresses Cowling.

Titan Adblue is a new exhaust after-treatment product offered by Fuchs as part of its total solutions approach. "We offer everything from engine to transmission oils, cleaners, and coolants. Whatever the customer needs from a lubricants and grease perspective, we have it." Titan Adblue therefore plugs a gap in the market as the company strives to offer a complete product basket to customers.







Electric 3 and 4-wheeler forklifts for all your warehousing needs

Developed for intensive stacking applications focusing on productivity, reliability and ergonomics including:

- Advanced safety
- Management support
- Outstanding operability
- High productivity and efficiency



toyotaforklift.co.za



New addition enters the lower end of nitrogen generator offering

ATLAS Copco has added a new model, the NGP 130+, to its PSA nitrogen generator line-up. At the same time, it is introducing next-generation control and automation technology to all its smaller (8-130) NGP+ units. The premium NGP+ range is now complete, in terms of available sizes and features, delivering best-in-class flexibility, reliability, and low cost of ownership.

The NGP 130+ offers a nitrogen flow of 37-264 Nm³/h (depending on the selected purity), giving customers in this segment a single nitrogen generation solution built to their needs. The new model completes Atlas Copco's premium Pressure Swing Adsorption (PSA) nitrogen offer. The NGP+ range is now available in all flow sizes from 1.9 to 2871 Nm³/h (at reference conditions).

"We now offer an NGP+ for every

customer. That is a big deal because this range fulfilment translates into real customer value," said product manager industrial gases with Atlas Copco's Industrial Air Division, Ben Christianen. "Generators are most efficient at full load. The NGP 130+ ensures that no matter the capacity request, customers can always operate with maximum efficiency, and that they don't need to size up or work with a parallel installation. This in turn means they can enjoy the NGP+'s superior performance and reliability without compromise."

At the same time, Atlas Copco is rolling out its next-generation control and automation technology in all its smaller NGP+ models (NGP+ 8-130) to give customers industry-leading efficiency and reliability.

This includes the nitrogen purity check, which continuously monitors the nitrogen output and reroutes

it when its purity doesn't meet the selected standard. On the inlet side, the feed air check blocks air that is of subpar quality from entering the generator and possibly compromising its operation.

The variable cycle saver algorithm optimises the PSA cycle during lower demand and in colder temperatures, giving customers up to 40% additional energy savings.

All NGP+ 8-130 models come with the top-of-the-line Elektronikon touch controller with easy gas purity selection and advanced monitoring and connectivity options.

A number of new optional features are now also available for the NGP+ 8-130 to meet customers' specific requirements. This includes a room oxygen alarm, the ability to work in very low ambient temperatures and to produce ultra-dry nitrogen.

The new NGP+ 8-130 comes with



the same modular build with extruded aluminium tubes as the existing generation. It ensures a compact footprint and a durable operation.

Another asset is the NGP+'s industry-leading low total cost of

ownership. The generator and its software are designed to utilise the premium carbon molecular sieve adsorbent with maximum efficiency to ensure minimal air consumption per unit of nitrogen generated.

Pushing polymers to the limit



MODERN plastics have improved to the point where they can outperform traditional materials in a myriad of applications and even withstand high loads and abrasive conditions.

Polymer technology in products like igus' igutex fibre composite technology is able to withstand extreme loads in heavy-duty applications.

With advancements in polymer technology, the application boundaries for technical plastics have expanded significantly.

Motion plastics specialist, Juan-Eric Davidtz of igus South Africa says as a result polymers have gained widespread use in various industries. It easily replaces steel or bronze in loads exceeding 100MPa. This is where companies like igus have been at the forefront of developments with new thermoplastics with fibre reinforcements boasting impressive strengths in real-world scenarios.

"In the real-world materials face

alternating, unevenly distributed and dynamic loads that impact them in multiple ways. Forces can act simultaneously in different directions or induce fatigue and stress due to frequent changes in intensity and direction.

"Therefore addressing high-load scenarios requires a multidimensional approach surrounding factors beyond just material compressive strength, but also shear strength, toughness and creep resistance are equally crucial attributes that must be considered, says Davidtz. As a result, our researchers and engineers have turned to high-performance polymers and formulations, utilising flexible injection moulding processes and harnessing fibre composite technology.

"With over four decades of experience in plain bearing development,

we have perfected our igutex TX3 material for this kind of heavy load application. These bushings utilise extremely strong filaments woven together to absorb high loads effectively. By embedding solid lubricants for friction reduction and lubrication-free operation, igutex combines mechanical stability with high load-bearing capacity," says Davidtz.

He explains that fibre composite technology offers a fresh perspective especially when traditional injection-moulded plain bearings reach their limits.

Like the thermoplastic iglidur materials, igutex TX3 allows for tailored properties through recipe changes in the fibre composite technology. The material's shape and processing method can be influenced, resulting in materials well-suited for various requirements. This development not

only enhances resistance to high loads but also provides a new level of performance in heavy-duty applications.

While high-strength fibre composites exhibit unparalleled strength values, injection moulding holds its ground as a potential cost-effective solution, particularly for large quantities. igus maintains dedicated teams of engineers to explore the capabilities of injection-moulded thermoplastics.

The iglidur Q3E, a multi-layer plain bearing exemplifies this approach, combining various optimised iglidur materials to perform different tasks. With high-load applications no longer confined to solid steel or bronze bearings, igus is redefining the possibilities of high-performance polymers.

Belt alignment tool accurately aligns belt and chain drives

MANY industries operate a variety of belt-driven machinery such as HVAC equipment, milling machines, compressors and camshafts. The accurate alignment of belt and chain drives, while seemingly a fairly insignificant task, can make a considerable contribution to a plant's overall production levels and subsequent profitability.

Precise alignment will reduce wear on belts, pulleys, chains and sprockets and minimise machine vibration, thus improving machine performance, cutting down energy costs and extending belt and pulley life for maximised plant availability.

"SKF has a very simple solution," says SKF product manager – MaPro, Eddie Martens. "The SKF TKBA series of Belt Alignment Tools has been specially designed to accurately align pulleys and sprockets and to also allow for corrections for various types of misalignment. The versatile TKBA 11, TKBA 21 and TKBA 31 devices can be applied to most machines that use V belts, banded and ribbed belts, including those with chain sprockets."

The tool is extremely user-friendly: the two components on the TKSA 11, a laser-emitting unit and three passive targets, can be quickly and eas-

ily attached to the inside or outside face of a belt pulley or chain sprocket using a powerful magnet. A laser line is projected from the emitting unit to the passive targets which are mounted on the opposite pulley. The tool then allows for correction for vertical and horizontal angles and parallel misalignment as well as combinations of all three.

The TKSA 21 and 31 have two laser emitting heads as well as passive targets which allow for very accurate alignment. The sturdy hous-



ings, made from ABS and 2K polymers and an aluminium base, help to ensure stability during assembly and accuracy during alignment.

The TKBA 11 Precision and TKBA 21 Advanced tools operate effectively over distances of up to 3m, using one and two red diodes respectively. The TKBA 31 Pro advanced tool uses a highly visible green laser diode which is effective up to 6m; this model can also be used for

outdoor applications in sunny conditions.

The TKBA 11 runs on three AAA batteries for 32 hours of continuous operation while the TKBA 21 and TKBA 31, each using six AAA batteries, respectively deliver 32 and six hours of continuous operation. All TKBA components, including the laser transmitter/receiver units, three passive targets and batteries, are supplied in a sturdy carrying case with a total weight of only 1,88kg for easy, safe portability.

The TKBA 31 is also supplied with a wear check/pulley groove gauge and tension checkers as standard.

LED solar-powered light tower is a bright, clean, silent solution

POWERED by a renewable energy source, in this case, solar radiation, the HiLight S2+ LED light tower from Atlas Copco consumes no fuel and emits no emissions and no noise.

Compared with traditional diesel-driven technologies, the S2+ enables users to reduce CO₂ emissions by up to six tonnes, assisting them to sustainably comply with carbon emission as well as noise regulations.

This cutting-edge, ultra-efficient light tower's four 90W LED floodlights deliver a market-leading 2,000 m² light coverage at an average of 20 Luxes. This excellent visibility creates a bright, safe and productive work environment in gloomy conditions and after sunset.

"Our versatile, next-generation solar light tower can operate autonomously for up to eleven hours at 100% operation where solar yield is greater than energy demand," notes Atlas Copco Power Technique's business line manager - portable prod-

ucts, David Stanford. "Importantly, for users, this means maximum uptime and subsequent high productivity. If energy demand exceeds solar yield, operators have the convenient choice of charging the tower with Atlas Copco's clean energy ZenergiZe energy storage system or any external power grid."

The S2+ unit's batteries can be recharged using solar energy or an external power source which takes approximately eight and three hours respectively. "The tower is equipped with a dimming function that prevents light and energy from being wasted unnecessarily, further increasing autonomous operation to meet lighting requirements for long work shifts," adds Stanford.

Atlas Copco's innovative LED technology is incorporated into its complete LED light tower range. By applying an innovative, fully directional LED lens design, Atlas Copco engineers have maximised the light coverage while reducing 'lighting waste'. The LEDs' lifespan of 50,000

hours further maximises uptime and productivity while reducing replacement costs and maintenance requirements. The lenses in the S2+ tower feature a very special optic that is designed specifically for construction and mining applications.

Set-up and operation of the user-friendly, ergonomically-designed light tower is quick and effortless; once easily manoeuvred into position, the extendible solar panels are simply pulled out from the pop-up canopy and adjusted to best align with the sun's position for maximum solar yield; there are no external cables, refuelling is not required and the external control panel further facilitates operation. The portable, compact light tower is easy to move around the job site and to transport between sites.

The robust light tower's ability to perform reliably in temperature extremes (-5°C to +50°C) and at high altitude without derating, makes it particularly suitable for stringent environments and remote work sites.



The pop-up canopy facilitates serviceability, keeping downtime to a minimum. The low maintenance and service costs deliver excellent operational cost savings. This, coupled with high efficiency and performance, provides a quick return on investment for end-users.

The HiLight S2+ addresses the

efficiency, performance, environmental and safety narratives. The unit offers a sustainable lighting solution for end-users and rental companies in the infrastructure, mining and oil & gas sectors and also meets the noise-sensitive regulations for event organisers and construction projects in urban areas.

Transforming FMCG production with state-of-the-art coders and labellers

IN the fast-paced world of fast-moving consumer goods (FMCG) production, every second and every detail counts. Precision, speed, and reliability form the foundation of this high-stakes industry. Rising to the occasion are revolutionary advancements in coding and labelling technology that transform how businesses operate, boosting efficiency and accuracy like never before.

The new age of primary coders

Pyrotec PackMark supplies primary coders like the Anser x1 and Small Character Inkjet 9018 bringing precision and reliability to FMCG manufacturing coders. Designed for high-speed, continuous coding, these product coders can quickly

and efficiently handle large volumes of FMCG products. They are especially beneficial as date coders for FMCG products, ensuring that every product is accurately coded with the correct dates and information.

Labellers: Changing the face of FMCG production

The Print and Apply Labelling – 2200 Pallet delivers new levels of efficiency. Perfect for more significant operations, this machine is a high-speed marvel, rapidly printing and applying labels.

The Entry-level Self-adhesive Labeller ELDH is a top-notch option for businesses that are beginning to grow, offering top-of-the-line labelling solutions. These self-adhesive label-

lers handle various product shapes and sizes, ensuring accurate, secure labels each time.

Advanced coders and labellers - the benefits

Using these state-of-the-art manufacturing coders and labellers brings multiple benefits, including:

- **Exactitude and consistency:** They drastically reduce errors, ensuring that every code and label is precisely placed and accurate; this means fewer wasted products and higher customer satisfaction.
- **Speed and volume handling:** These coders and labellers can handle large volumes of products at high speeds, keeping production lines moving smoothly, and



this is a crucial advantage in the FMCG industry, where time is money.

- **Adaptability:** Regardless of the product's shape, size, or material, these coders and labellers are up to the task. They are adaptable and versatile, providing all-in-one solutions ready to handle produc-

tion line challenges.

The right coders and labellers can make all the difference in the ever-evolving world of FMCG manufacturing. With this advanced range of primary coders and labellers, a business will be well-equipped to enter a new era of efficiency, precision, and versatility.

Embracing state-of-the-art mobility solutions

WITH retail warehouses growing ever bigger, the task of workers and maintenance crews getting around the giant facilities can be challenging and calls for a different way of doing things.

This is where one of the country's largest retailers recently took the bull by the horns and ordered a number of different solutions for ClubCar carts as drive arrounds for managers as well as to carry maintenance crews and their tools quickly, quietly and cost effectively around their massive new warehouse facility in Gauteng.

A globally recognized leader in golf cart manufacturing, ClubCar has a number of different versions of its well-known carts for use in such applications. In South Africa, they are distributed and supported by Smith Power Equipment, which

worked with the retailer to find the best solutions for their needs.

Smith Power Equipment's Joe van der Walt says distribution centres and warehouses are growing in size and can easily require a walk of several kilometres to get from one side to the other. It is also time-consuming which is counterproductive in an environment that is set up exactly to service "fast-moving consumer goods" that needs speedy intervention whenever assistance is required.

"We initially worked with our client to find suitable vehicles for the manager and the facility manager to drive around on-site and in the warehouse. We looked at various options ranging from our small electric warehouse



tractors to petrol or gas-operated golf carts. In the end, however, the best solution was the new lithium range of people carriers from ClubCar. These fit the requirement like a glove, are lower maintenance than lead acid models and do not have any form of emissions as would be the case with

internal combustion motors.

"Here we used a two-seater version of the ClubCar and it so impressed the retailer that they soon turned to us to transport more people at a time which led to the subsequent introduction of our ClubCar Tempo 2+2 lithium carts which take four people and has proved to be a perfect fit.

"While the two-seaters are used for transport inside and around the warehouse, the ClubCar Tempo 2+2 units are used at the distribution area and we recently introduced the ClubCar CA300 Utility which is used to carry workers and goods inside the distribution area. The electric utility car has a bed load capacity of 136kg and towing capacity of 362kg which

makes it ideal to load maintenance equipment.

"The customer also bought peace of mind as ClubCar has the longest warranty in its class and the manufacturer has produced more than 1,00,000 cars in the past 10 years. Its commitment to

quality and reliability underscores our aim to provide a solid foundation for successful long-lasting partnership," Van der Walt says.

A less well-known benefit of Smith Power Equipment solutions is the high degree of customisation that provides customers with the ability to adapt its offerings to the individual needs of customers. This is indicated through the retail version's inclusion of safety features such as strobe lights, front headlights, taillights and horns.

New robot unleashes the future of industrial automation

IN the dynamic landscape of industrial automation, Yaskawa's Motoman GP20 robot stands as a beacon of innovation and precision, redefining the way industries approach manufacturing and automation.

This advanced robot is more than just a machine; it boasts cutting-edge technology, precision and speed, as well as unparalleled versatility and reliability.

At the heart of the GP20 lies an intricate puzzle of advanced technology. It's a testament to Yaskawa's commitment to pushing the boundaries of industrial automation. "The GP20 isn't just a robot; it's the embodiment of cutting-edge technology, forging the path forward in industrial automation," says sales manager at Yaskawa Southern Africa, John

Mostert. With its state-of-the-art sensors, precision control systems, and intuitive programming capabilities, the GP20 offers a glimpse into the future of manufacturing. Its adaptive learning algorithms ensure that it continually optimises its performance, making it an invaluable asset for industries seeking to stay ahead in the automation game.

Precision and speed: redefining productivity

In the manufacturing world, precision and speed are the parameters of success. The GP20 doesn't just demonstrate this; it exemplifies it. With meticulous accuracy, it executes tasks with a level of precision that minimises errors and maximises efficiency.

But precision alone isn't enough in today's fast-paced industrial environments. The GP20 matches precision with speed, delivering lightning-fast cycle times without compromising on accuracy. "From material handling to inspection, welding, and machining, the GP20 shines in a range of applications across the manufacturing and automation sectors," says Mostert.

Versatility: adapting to customers' needs

Manufacturing and automation needs are diverse, and the GP20 meets and exceeds expectations. Its versatility knows no bounds. From material handling to intricate assembly tasks, it can even transition between applications, streamlining

processes across industries. With its modular end-effectors and adaptable programming, the GP20 is a versatile tool for any task at hand.

The rigours of industrial environments demand unwavering reliability. This dependable component is able to operate in challenging conditions. Its robust construction and meticulous quality control ensure it can endure hazardous production environments. It delivers consistent performance, minimising downtime and maximising productivity.

The GP20's value shines in a range of applications across the manufacturing and automation sectors:

- **Material handling:** Whether it's moving heavy payloads skilfully or managing delicate materials with care, the GP20's precision and

capability make it a go-to choice for material handling tasks.

- **Assembly:** In the world of intricate assembly, the GP20's precision ensures perfect fits and enhanced product quality, while its speed guarantees rapid production.

- **Inspection:** With advanced vision systems and meticulous attention to detail, the GP20 excels in quality control, ensuring that only the finest products on output.

- **Welding and machining:** The GP20's precision and repeatability make it a valuable asset in welding and machining processes, where accuracy is paramount.

- As industries evolve, the GP20 paves the way forward, offering the tools needed to thrive in an ever-evolving landscape.

Follow us ...

and keep connected for your regular regional industry news

Tel: 0861 122 441

www.easterncapeindustrialnews.co.za

Join the conversation:  @easterncapeindustrialnews
 @indbiznews

