

CAPE Business News



FOUNDED 1980

National Distribution

NOVEMBER 2022

Premier Fishing celebrates



70 years at the helm.

7

Syspro 4 recalibration tactics

Drives growth for manufacturers and distributors.



11

PepsiCo commit to use 100% renewables

4.2 GWh annually by end 2023.



25

Chasing the pipedream?

Renewables have their part to play in South Africa's energy future, but are certainly not the panacea for base load generation, here or in any other part of the world, despite the misinformation peddled by their proponents as fact that they can and regularly regurgitated by the wishful thinkers.

The Editor asked Nick de Blocq, CEO of natural gas exploration company Kinetiko Energy for his opinion and got a healthy dose of common sense as a response!

"I read recently that if solar was to take over 100% of our electrical power needs in SA in a decade from now, then we need to plant 166 million panels between now and 2032. That's nearly 50,000 a day, every day. Quite apart from the conductor and distribution infrastructure that would necessarily accompany that, it is quite obviously a complete figment of the imagination. It is not going to happen....not even close!

Face the facts

Here are some facts about so-called Renewable Energy that a lot of people do not know:

- Both wind turbines and solar panels are petroleum products. If you get rid of oil and gas, you get rid of those too.
- You need petroleum to mine the minerals, process the ore, manufacture the goods, transport and construct the products.
- Every panel and wind turbine represents an eventual, non-decomposable landfill element, even if they are somehow recycled once or twice.
- The construction of solar panels releases a toxic gas called nitrogen-trifluoride to the atmosphere. These molecules are too stable to break down and will be there forever, unlike methane (which is indeed a natural gas-based GHG) which decomposes over time.
- Wind and sun will never be reliable sources of energy as they depend fully on climatic conditions, and globally they have proven to supply, on average, no more than 20% of their installed capacity over time. It is no different in SA.
- The storage of power remains an unachievable challenge on a national, industrial, and global scale. The largest



Nick de Blocq.

manufacturer of batteries in the Western Hemisphere, Tesla's factory in Nevada, would require a collective output of 500 years of production to power the USA for one single day!

- There are not enough minerals on the planet to manufacture batteries to convert even half of the internal combustion engine vehicles in operation today into EVs, without even competing with solar for domestic and industrial power storage demand.

The nuclear option

Every country that can, should be building nuclear power solutions, as this is the cleanest form of electrical energy we have today. And we should be investing in research to miniaturise nuclear towards a form that could be individually used in our cars and homes. I think this is becoming less "science fiction" and more "science". But between now and turning that key some decades down the line, the case for gas could not be stronger. One needs to look no further than the facts.

There is no other solution visible for some decades that has the capacity to substantially replace coal for both power, liquid fuels and thermal industry. And its decarbonising effect is immediately evident. Not that the carbon output from burning coal, diesel and heavy fuel oil is the most pollutive part of that process – it is more about the particulates; the nitrogen oxides, sulphur dioxides, ammonia and sooty ash. Gas negates all of that, with a

far superior calorific value.

The USA had a 28% growth in its economy over the last two decades, and a concurrent 32% drop in emissions, entirely due to replacing coal with gas. It's a no brainer! To clarify further, if (theoretically) we could replace all of SA's coal fired plants with gas today, we would over-subscribe our COP obligations immediately and forever! It is without doubt the green alternative for the other forms of fossil fuels. Having said that, as long as we need things like plastics, lubricants, cement, clothing, computers, phones, chemicals, medicines, etc. we will have to keep producing oil.

The "Just Stop" campaign is almost childishly naïve in that respect. They walk into a petroleum product (building) wearing petroleum products, throw a petroleum product at a painting, and use a petroleum product to glue their hands to the wall, and then pull out a petroleum product (phone) to read a statement that says "no petroleum!" Is this just irony? Or is it immature hypocrisy at its worst? You decide....

On the KW Miller diatribe rubbishing Eskom

Where KW Miller gets it wrong in his scathing attack on Eskom is that there IS gas in SA, and what we cannot produce locally in terms of demand, we can import via virtual pipelines of LNG. Kinetiko operated Rights Holder in SA, Afro Energy, has a current 2C resource of 4.9 TCF, which will almost certainly grow as they add acreage under application. It is already within the top 10%-15% of onshore gas resources on the planet! For scale, Mossgas flowed profitably for 20 years on 1 TCF, and Sasol designed its 30-year production from the Pande/Temane fields in Mozambique to feed Secunda on a resource of 2.5 TCF. And Kinetiko is not the only one. Throw in Renergen, Rhino, Tungela, Bastion, Invictus and others into the mix, plus the massive treasure of gas under the Karoo, and it becomes easier to imagine that South Africa, like the USA has done, could become a self-sufficient energy producer and exporter with the right regulations in place, fiscal certainty, and appropriate investment in the private sector. Imagine the benefits of an inflow of sovereign revenue versus the current outward flood of our forex to procure imported content for our energy requirements? It doesn't have to be a dream!"

W Cape Government cuts red tape to stimulate economic growth



Image credit: News24.

ANTON Bredell, Western Cape Minister of Local Government, Environmental Affairs and Development Planning, on Thursday 27 October 2022, granted an exemption to all municipalities in the Western Cape from certain provisions of the Western Cape Land Use Planning Act. The aim of the exemption is to encourage the integration of the public participation processes in the various laws that govern new developments.

"This is another action step of the Western Cape Government to cut red tape, creating an environment for the private sector to grow our economy and create jobs," Bredell said.

Recent studies have shown that developers who must obtain such a range of development approvals could easily wait up to six years before construction can commence. To address this challenge, the Premier established the Fixed Capital & Property Development Work Group (FC&PD) which identified several initiatives to reduce the overall regulatory burden of development applications. Integrating the various processes more effectively is one of the activities of the FC&PD.

"Ultimately the laws governing these sectors need to be streamlined for more effective integration, but, because amending laws takes so long, I have made use of the exemption mechanism provided for in the West-

Continued on P4



fastenright

Your Stainless Steel Bolt and Nut Experts

We have just received new shipments of stainless steel UNC/BSW bolts, nuts, cap screws and rods!

CONTACT US
t: 021 534 9095
f: 021 534 5997
sales@fastenright.co.za
www.fastenright.co.za

VISIT US
27 Mail Street
Western Province Park
Epping



best service | competitive price | high stock availability

Stainless Steel UNC/BSW Fasteners

IN THIS ISSUE

- 13 Sustainability: Net Zero
- 14 Energy Sources: Renewable Energy / Wind / Solar PV / Bio Energy
- 17 Power Transmission: Drive Technology / Bearings / Motors
- 18 Industry Bodies / Institutes
- 22 Transportation / Freight / Logistics & Supply Chain Management
- 24 Food / Bev / Dairy: Factory Engineering & Production Lines
- 26 LNG & LPG Gas: Storage / Processing / Logistics
- 27 Flooring: Finishes / Sealants
- 28 Hydraulics & Pneumatics
- 31 On the Contrary

Read in high places



A delegate at the recent Aluminium Federation SA Conference catches up with an exclusive article on SA's energy future. (You can too by visiting <https://www.cbn.co.za>)

Spear Reit acquires 21 000m² "The Island" Urban Logistics Park in Cape Town

SPEAR Reit has announced that the Company had entered into an agreement to acquire The Island Urban Logistics Park in Paarden Eiland, Cape Town for R185 000 000 from last mile industrial park specialists Inospace. The Island Urban Logistics Park is 100% occupied by local and international tenants. As supply chains and logistics services are redesigned as a result of the global pandemic and the adoption of a China plus one strategy, urban logistics parks have become attractive investment opportunities in South Africa. The Western Cape real estate sector has shown incredible resilience coming out of the Covid-19 pandemic and this latest acquisition by Spear Reit has been well timed.

Spear Chief Executive Officer Quintin Rossi noted that "The Acquisition is in line with Spear's stated strategy to continuously increase portfolio exposure to high quality industrial real estate with a focus on logistics, urban logistics and bulk warehousing within the Cape Town Metropol as a



The Island Urban Logistics Park.

key driver of Spear's focussed but not rushed growth plans. The Island acquisition is a natural fit into the Spear portfolio".

Spear's current assets under ownership are valued at R4,48 billion; an increase of 221% since listing in 2016. Currently the Spear portfolio consists of 30 Western

Cape assets, the top five (by value) equate to 48% of the total portfolio value and are spread across industrial, convenience retail and commercial real estate in the Cape Metropol. Spear's portfolio segmentation reinforces the Company's strategy of diversification across selected property types, while

supporting a Western Cape-only strategy. This 'Western Cape only' approach has proved to be a sound investment strategy which demonstrates a proximity advantage with the upshot of effective asset management and efficient property management turnaround times.

The Acquisition of

the Property further bolsters Spear's high quality industrial portfolio and will meaningfully contribute to the ongoing sustainable and consistent cash-flows generated across the balance of the 100% Western Cape portfolio. Spear's current industrial portfolio occupancy sits at 98% across 247 047m².

Report confirms benefits of Buy Local campaign

PROUDLY SA has commissioned the Pan-African Investment & Research Services team, led by economist Dr Iraj Adedian, to produce the *Revitalising SA's Manufacturing Sector* report. The report analyses the South African manufacturing industry and quantifies

its valuable contribution to the country's economy.

The 60-page study is the third in a series of research papers that identifies the sector's potential in boosting the country's development, especially on the back of the Covid-19 pandemic and over and above pre-existing challenges. The report finds that a process of de-globalization is at play, partly driven by ongoing global supply chain disruptions, highlighting the need for increased localisation as a means of expansion, security and survival for specific industries.

The report includes investment scenarios showing that a mere 10% increase in investment spending in the manufacturing sector could lead, in the medium term, to:

- 13% GDP growth
- 8% more jobs created
- 8.3% overall boost to investment across the economy
- 9% jump in tax revenues

Calculations of actual numbers of jobs created across all skill levels reveal potential medium-term gains of:

- 75 300 new jobs in manufacturing
- 11 500 new jobs in mining
- 10 100 new jobs in agriculture

Local procurement, the report reveals, plays a vital role in the local manufacturing sector and, done correctly, could help bolster the struggling industry.

Said Proudly SA CEO, Eustace Mashimbye: "The study confirms what we've always said; that we can't downplay the economic impact of localisation. It gives us a clear sense of what impact there'd be if we started buying local. If you look at the data we've now got, it's a no-brainer."

"We are constantly challenged by naysayers who tell us we must focus only on those industries where we have a competitive advantage, and not



worry about localisation. But we can't condemn people to unemployment forever; these research findings show that we can turn things around by utilising the buying power at our disposal," said Mashimbye.

The views are backed up by the study's author, Dr Iraj Adedian, who said localisation had now become economically sensible, not just socially and politically.

"Manufacturing in SA has huge potential, availability, socio-economic impact, and environmental impact. And SMEs are at the centre of this as the creators of jobs and

opportunities. If the government listens and engages more with SMEs, sector by sector, region by region, we can get manufacturing revitalised."

Abadian said SA needed to move away from generalising investment, and instead identify specific opportunities that brought together relevant stakeholders to transform them into success stories.

Download the full report by visiting: <https://www.proudlysa.co.za/newsportal/press-release/Revitalising%20SAs%20Manufacturing%20Sector%20-%202022%20Final.pdf>

PARTS STORAGE



PLASTICS FOR AFRICA

3 Montague Drive, Montague Gardens
021 551 5790 | www.plasticsforafrica.co.za

How can we fix SA's water challenges?



Image credit: Echologics.

Non-revenue water is any water pumped into a distribution system that goes to waste before being used or is consumed but not recuperated financially. Ultimately, municipalities take the losses - an opportunity for the precarious financial position of many South African towns and cities.

We can address non-revenue water in several ways, including public education and improved meter reading. But leaks are the lowest-hanging fruit, accounting for the vast majority of lost water. It can take crews hours - even days - to reach a leak and fix it, and all the time in between is water - and money - down the drain.

The aforementioned data-driven systems are proficient at identifying flow rate and pressure changes in pipes that indicate leaks.

A more futuristic example is using sound to pinpoint all sizes of leaks and structural weaknesses that will burst. Acoustic balls are little technological marvels that travel down pipes, achieving this task in a fraction of the time it would traditionally consume. The ability to detect, fix and even stop leaks before they happen is considerably more powerful today than ever before.

Fixing SA's water

Fixing SA's water will require investment and collaboration. Fortunately, water technologies are in an excellent position to realise both ambitions. Data-driven maintenance and quick leak detection join innovations such as energy-efficient pumps, low-chemical water treatment, high-efficiency irrigation, and water capture and recycling systems.

No single action will improve the situation. But through several interventions - many being much more affordable and flexible today thanks to technological advancements - we can secure South Africa's most valuable natural resource.

By Chetan Mistry, Strategy and Marketing Manager at Xylem Africa

JOHANNESBURG and its surrounding cities have experienced population growth of over 400% since 1950. Gauteng, the country's smallest province, is also its most populated at 13 million people. And specific communities, such as Soshanguve and Rustenburg, have grown over 2 500% in the past 70 years, according to UN data.

Recently, taps ran dry in Johannesburg even though nearby dams were full. Water authorities said that high consumption rates are a problem and noted the negative impact of loadshedding on pumping operations. But other views identify a much wider range of problems relating to infrastructure and management woes.

Two areas stand

out where we can act quickly: infrastructure maintenance and non-revenue water. Both can benefit from advancements in the water industry, using retrofitted solutions that can increase the lifespan of current pipelines, pumping stations and other water infrastructure.

Digital Maintenance

Digital maintenance systems significantly enrich our understanding of what is happening in water infrastructure. Such systems identify maintenance issues and rate their risk levels, gather accurate and even real-time usage data, monitor pump performance and power consumption, and generate reports for different needs such as strategic planning and capacity development.

The data revolution opens new doors for three reasons. First, cheap yet robust sensors can retrofit onto

existing equipment, allowing water operators to selectively sweat certain assets longer (and new systems also integrate with existing sensors and SCADA operations). Second, the leading digital maintenance systems provide unified 'single view' dashboards for a big picture that experts can use to dig into specific areas. And the third is mobility: such data dashboards work in operations centres, office computers, and in the field on phones and tablets.

Even at the early stages, the insights generated by data help forge clear direction and strategies to get more from infrastructure, fix problems and prevent damage before it occurs.

Non-Revenue Water

South Africa's non-revenue water rate is staggering: 41 percent compared to the global average of 15 percent.

Strange tower rises in Melkbosstrand!



IS it a bird? No, it a plane, no, its???

The Editor spies a new addition to the sleepy Melkbosstrand skyline.

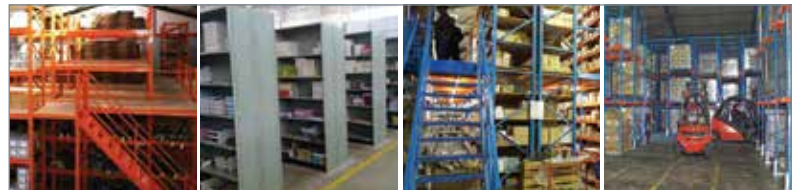
Located in the vicinity of Commaile Road and 15th Avenue in a 'government compound' is the new struc-

ture comprising covered scaffolding, what looks like a communications tower, albeit of a temporary nature.

Judging by the antennae on the top, it possibly has something to do with the transmission of internet signals, espe-

cially as the new Equiano undersea carrier cable made its landfall in Melkbosstrand during August.

Readers with inside information are urged to call the Editor to put him, and others, out of their misery!



Need a Storage Solution?

Dexion offers efficient, cost effective solutions of all your storage requirements. Dexion racking is designed and manufactured in compliance with the S.E.M.A code of practice, providing you with a quality, fully adjustable storage solution.

- » Rack inspections, rack maintenance and certification
- » Static Racking
- » Cantilever Racking
- » Shelving
- » Mezzanine Floors
- » Conveyors
- » Mobile Racking
- » Mobile Archive Shelving
- » Small Parts Storage & Bins
- » Staff Lockers

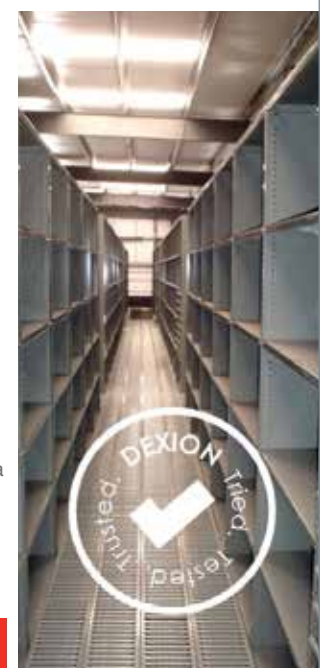


Smarter thinking.

Cell 083 264 6043 Email ron@dexioncape.co.za
Tel 021 552 0220 Fax mail 086 517 2949

Southern Storage Solutions (Pty) Ltd
t/a Dexion Storage Solutions
Unit 22 • Frazzitta Business Park cnr Koeberg & Freedom Way • Milnerton • Cape Town • 7441

www.dexionrackingandshelving.co.za



Future proof your fire protection system with **FireDos**®

Speak to the company that knows foam systems best

Efficient • Effective • Easy to use & test

FireDos foam dosing proportioners and skids • Monitors and water cannons • Mobile dosing and monitor trailers • Bund, tank top and rim pourers



dosetech fire 30
special risk fire protection

+27 (0) 861 111 544 • Mike – mgf@dosetech.co.za
firedos@dosetech.co.za • www.dosetech.co.za

ALL INDUSTRIAL, MOBILE, SPRINKLER REQUIREMENTS

Mpact Recycling expands on-site services into major metros



IN September, Mpact Recycling announced that their on-site waste management service offering, previously called Remade On Site, would be rebranded as Mpact Waste Management and become its own independent brand within the Mpact Group.

Mpact is a paper and plastics packaging manufacturer and recycling business in Southern Africa. Its integrated business model is focused on closing

the loop in the plastic and paper packaging manufacturing cycle by continuously maximising value and minimising waste.

The previously named Remade On Site was the on-site waste management service offering within Remade Recycling. It comprises a team of experts with over 30 years of waste management experience that create bespoke waste management solutions for its clients and work

on site at their premises. The teams operate at over 250 sites nationally, offering tailor-made solutions for businesses of all sizes, big or small.

"Mpact Waste Management offers its customers a single point of contact and the team is easily accessible," says John Hunt, Managing Director of the recycling business comprising Mpact Recycling and Mpact Waste Management.

"The Mpact Waste

Management team get to know their sites intimately so they understand a business' individual waste patterns, can advise accordingly and adapt an environmentally acceptable solution where necessary," he says.

This on-site perspective allows Mpact Waste Management to assist businesses in reducing the amount of their waste going to landfill by identifying what can and cannot be recycled, and what is potentially hazardous waste. Business owners can also be assured of legal compliance through the implementation of on-site waste management solutions.

"This change ushers in a positive era for our business that provides a national footprint of recycling services, which serve our clients and customers better, and fosters a strong sense of collaboration among our employees," concludes Hunt.

Mpact Waste Management serves the following industries:

printing, packaging manufactures, FMCG, retail, commercial, manufacturing and logistics and distribution.

Mpact has a footprint of 44 operating sites in South Africa, Namibia and Mozambique.

In 2021, Mpact collected over 600,000 tons of paper and

plastic recyclables from pre- and post-consumer sources. In closing the loop in the paper and plastic manufacturing cycle, the amount of material going to landfill is reduced, local beneficiation of raw materials is promoted and the development of small businesses is supported.

The business' mission is to develop practical, economically viable and environmentally sustainable solutions that bring South Africa closer to a true circular economy.

For more information on the Mpact Group visit www.mpact.co.za

W Cape Government cuts red tape to stimulate economic growth

Continued from P1

ern Cape Land Use Planning Act to grant the exemptions in the interim until such time as the laws have been amended formally. In doing this, develop-

are enabled to process some of these applications in parallel and save a lot of valuable time," Bredell said.

According to a recent report by Statistics South Africa, the

value of building plans passed in the province totaled R24.29bn for the period between January and August 2022. This represents a year-on-year growth rate of 25.2%.

Integrating operations with a single contract

SOUTH Africa, and countries around the world are experiencing rapid increases in technical skills shortages. In many areas, this issue has deteriorated to the point where several industries (especially those in the engineering disciplines) have started to bring skilled professionals out of retirement.

This means that many diverse industries in South Africa do not have ready access to this shrinking skills pool, and when companies have needs that include refrigeration, steam production or energy generation, the solution is increasingly to outsource these functions to dedicated service providers for operation and maintenance.

As Manie de Waal, CEO Energy Partners points out, that when businesses rely on all three of these essential operations, it becomes even more important to outsource these to dedicated service providers. "Operating and maintaining one's steam, refrigeration and renewable energy systems places the difficult responsibility of attracting the necessary skills on the business."

He adds that combining these utility services under one outsourced contract not only removes this obstacle but can also lead to additional cost savings. "However, this requires a service provider that knows how



Manie de Waal.

to integrate technologies and is able to draw on the expertise of highly skilled technical teams."

Dawie Kriel, Head of EP Refrigeration Division explains that virtually all outsourced utility projects have the opportunity to combine inputs to create better efficiencies for the end user. "A good example is the work that we did with Clover SA. There, we combined our solar energy and refrigeration services into a single contract. The result is that 16% of the electricity of the refrigeration plant comes from the solar system, and we also deliver hot water to the boiler feed to reduce coal consumption and carbon emissions."

He notes that this will reduce the client's carbon emissions by 132 million tons over the next 20 years. "The Clover refrigeration plant's efficiency has increased by 33% and pairing it with the solar energy generation system has reduced their energy costs by around 40%. We

are also recovering 6% of the refrigeration system's heat to pre-heat the feedwater for the steam system."

De Waal says that a capable solar power provider is able to offer clients up to 60% saving on their current grid price of electricity through a Power Purchase Agreement. "In addition to this, service providers should also be able to put guarantees in place regarding future power purchase tariffs. For example, our own annual increases are capped at 6%, which is well below the annual increases to grid-tied energy."

In terms of steam production, while collaboration with other outsourced utility providers is less common, when this is done the benefits are substantial. Jonathan Probert, Head of Business Development for EP Steam, says that it is only within the last year or two that many businesses have recognised the value of collaboration where steam is concerned. "We have worked on a number of projects where steam production is combined with solar and refrigeration under one contract. The good thing is that these are for large clients that include Lynca Meats, Sovereign Foods and Clover SA, all significant projects that yield a lot of data and serve as examples of how well a client can benefit by combining these services" he concludes.

INVINCIBLE VALVES
SINCE 1982

TRUST IS WHAT MAKES OUR NAME OUR PROMISE.

Major industries in South Africa and globally trust Invincible Valves to continually innovate and invest in valve solutions for their industries.

With in-house rubber lining services for valves, pipes, fittings and vessels, we are able to offer complete service, maintenance and reconditioning services with exceptional service, pricing and quality standards.

The bond we have with our customers, coupled with world-class facilities means that the Invincible Valves team is able to continually provide customers with our enhanced services that leads to their profitability.

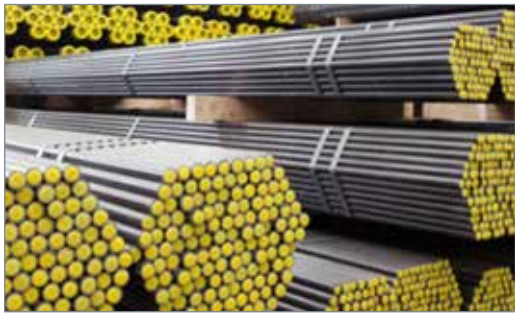
+27 11 822 1777
enquiries@invalve.co.za
invalve.co.za

LEVEL 1
BBBEE

GENERAL INDUSTRY | MINING | PETRO-CHEMICAL
POWER GENERATION | WATER | SEWERAGE

If its not INVAL, it's not Invincible

Boiler tube contract secured



BABCOCK has been awarded a five-year contract to supply high-pressure boiler tubing to a power station as part of future planned maintenance.

“Boiler tubing is one of the critical areas in terms of power station availability and reliability. These tubes have to withstand immense cyclic operational conditions, and if one of them fails, it brings the entire unit down,” says Alton Naidoo, General Manager – Business Development at Babcock.

“Therefore, the tubing has to be specified correctly and supplied to a high integrity to keep tube leaks and boiler failures to the very minimum” he explains.

Babcock has over 130 years’ experience in steam generation and industrial plants, and is the original designer of many steam boilers in South Africa and further afield into Africa – in fact, the company has one of the largest boiler installation footprints in Africa.

Babcock specialises in the front-end design of steam generation plant and associated equipment, and provides safe, effective solutions for the entire lifecycle of power and industrial plants, from design and build, through operation and maintenance, to decommissioning and remediation. The focus is on the feasibility of new build options, performance upgrades, efficiency improvements and emissions reductions.

Babcock utilises its OEM expertise to ensure that boiler tubing is specified correctly according to the required design codes and norms and that the detailed specifications are well controlled for the end product that is delivered.

“Because of the high temperatures and pressures it is subjected to, specialised material is required for the tubing with certain certifications according to the relevant EN and ASME codes,” says Naidoo. “This type of high-alloy material is not com-

monly available in South Africa and is generally sourced offshore. While it can be obtained from local stockists, there are limitations in terms of availability and quality.”

Naidoo says that Babcock sources the tubing directly from an offshore tube mill that produces it according to its customers’ unique and regulatory requirements, which allows for more specifications and tolerance according to the EN and ASME standards, customised sizing, a high level of quality control, and better pricing structure.

“Through our long-standing partnerships with our suppliers, we can secure the availability and ensure predictable lead times for these critical long-lead items.”

He adds the company’s customers are realising that long-lead items need a specific strategy to secure availability and better pricing, and that it is possible to have tubing specified according to their needs and maintenance plans instead of relying on availability from a stockist.

“Babcock can provide a competitive tubing offer, strategic planning for critical long-lead items, and specialised OEM knowledge to help customers across a range of sectors operate more effectively,” concludes Naidoo.

Rooibos research gets funding boost



SCIENTIFIC research into the health benefits of Rooibos have been boosted with a R4.8-million investment from the Department of Science and Innovation (DSI). The investment is aimed at unlocking the potential socio-economic value of SA’s favourite tisane.

Aligned to its core mandate of supporting research on Rooibos, the SA Rooibos Council (SARC) will match the Department’s investment, taking the combined funding to almost R10-million.

The Department’s, Sunita Kalan, Director of Sector and Local Innovation, explains that the funding has been made available through the Sector Innovation Fund (SIF) – a programme launched by the DSI in 2013 to increase the competitiveness of various sectors in the economy by way of incentivising increased investment into research, development and innovation (RDI).

In addition to the funding provided to the SARC through SIF, the DSI has also strengthened the Rooibos and Honeybush sectors through support provided to community growers in the Western Cape and the Eastern Cape.

The SARC responded to the call

with a proposal seeking to establish a scientific evidence base for the health benefits of Rooibos and was one of six proposals that were approved for funding in this phase of the SIF programme.

Joe Swart, Research Director for the SA Rooibos Council says the industry welcomes the partnership with the DSI.

“The demand for natural medicinal products in modern medicine as complementary or alternative therapies is on the increase, however, the potential medicinal values of these plants, including Rooibos, are not always properly researched and documented, and the industry and wider sector can benefit from an increased focus on R&D in this area.

“While Rooibos has been studied for well over 20 years and researchers have con-

firmed its beneficial properties, lack of funding has stymied progress. The additional investment will help the industry to move forward with studies that include human trials – an important next step in the development of therapies containing Rooibos as an active ingredient” he says.

Rooibos has already been hailed for its chemoprotective properties (reducing the incidence of inflammation, which is a leading cause of cancer), is good for the heart, helps to control blood glucose, fights inflammation and reduces stress and anxiety. Scientists consider it a rich source of polyphenols, that are packed with antioxidants and potential health benefits, which can be used in the development of phytomedicines, nutraceuticals

and cosmeceuticals.

Swart says human trials involving Rooibos could uncover alternative ways to help manage many modern-day diseases, including cancer, heart disease and other metabolic diseases like diabetes and Alzheimer’s.

The multi-million-rand funding will allow researchers to delve deeper into Rooibos’ ability to:

Swart says there is a growing trend at local and international research institutions to prioritise Rooibos as part of their novel food or functional food research, as well as for studies focusing on metabolic and lifestyle diseases.

Once a deeper assessment of Rooibos’ pharmacological qualities has been concluded, it will give an indication of how Rooibos can be used in the future.

To date, the SARC has contributed more than R21-m towards Rooibos-related research.

For more info on Rooibos, visit <https://sarooribos.co.za/>

Trust in performance

Ensure superior results

EXELTOP™ combines the best of our experience and technologies into a advanced built-in regulator for shielding gas cylinders. Innovation is our focus at Air Liquide, we are driven to ease your work and assure your safety and earn more.

Gas flow stability & accuracy for high performance gas operation

- A quick and safe connection every time
- Intuitive design, easy to use
- Built to resist with strengthened guard



Cnr Old Vereeniging & Andre Marais Streets, Alrode, South Africa, 1451 | +27 87 288 1100

Air Liquide
creative oxygen

EXELTOP™

CAPE BUSINESS NEWS

Cape Business News, founded in 1980, is primarily a promotional vehicle for companies that have the Cape Business community as a primary target market.

ADVERTISING

For all your advertising requirements, contact our Sales Team

sales@cbn.co.za

PREMIER FISHING CELEBRATES 70 YEARS AT THE HELM

One of the most transformed fishing enterprises is a nod to SA's democratic struggle



PREMIER Fishing (Premier) turned 70 years old on Sunday 23 October. From humble beginnings in 1952, the Level-1 BBBEE fishing company has grown into an internationally recognized brand with several verticals, a fleet of fishing boats, loyal seafarers and operational staff (some even celebrating their 40-year tenure with the company) and an enviable reputation for delivering quality products and customer service.

From starting out as a collection of several subsidiaries, to listing on the Johannesburg Stock Exchange (JSE) in March 2017 as a single Group, is one of South Africa's foremost sustainable fishing entities. It was voted number one in the 'Food, Beverages, and Other' sector by IRAS (Integrated Reporting & Assurance Services).

Premier Fishing continues to expand its influence, supplying markets across four continents – Asia, Europe, North America, and Africa, from operations in Cape Town, Hout Bay, Saldanha, Gqeberha, St Francis Bay and Gansbaai – the company's Atlantic Abalone aquaculture farm.

The milestone anniversary was officially heralded with simultaneous festive get 'togethers' in Cape Town and Gansbaai and attended by staff from across the company in the form of a traditional South African 'braai'. A similar celebration will take place later in November in Gqeberha, the home of Premier's squid operation – the biggest in the country. Trawler skippers and business partners also shared in the festivities at a Cape Town function where their contribution to the company's overall success was recognised.

Remarking on Premier's 70 years in business, newly appointed CEO, Sooren Ramdenee said: "It has not taken me long to realise that I have stepped into a company that truly values its people. It is this spirit which resonates throughout every level of the organisation, that has carried the company forward through all the ups and downs of business life in the 20th and now 21st century.

"These 70 years are a tribute to every person who has come through our doors, some of you even beginning your careers here, and who continue with us, including our intrepid seafarers, one of our most important assets. You are what make us successful, and your spirit defines the essence of our brand, which is enjoyed around the world to this day. Thank you all. I salute you. Happy Birthday Premier Fishing!"

One of the first fishing companies in South Africa to welcome a black-based management team and ownership, Premier has gone from strength to strength, selling its products into multiple countries across the globe, notably: Spain, Portugal, France, Italy, the UK, China, Hong Kong, Taiwan, Japan, Australia, and the USA.

Products include the likes of rock lobster, squid, pelagic, hake, abalone, and a fish emulsion trading under the globally recognised Seagro brand - a bio-fertiliser containing enhanced amino acids. Premier is recognised as the undisputed South African leader in squid and south coast rock lobster.

WHAT DOES THE FUTURE HOLD FOR PREMIER FISHING?

The world, as they say, is Premier's oyster. According to Ramdenee, with sustainability at the core of every aspect of its business, the company is looking to further consolidate its current product line but with a growth focus to expand its business opportunities locally and outside of its existing territories, through both acquisitions and fishing rights in other territories.

"While the global fish market took a bit of a knock over the COVID-19 years, it is starting to recover, and with-it fish stocks and the appetite for fish and fish-based products," said Ramdenee.

"This is in part fuelled by a surge in the global interest of leading a healthier more natural lifestyle – the adage of we are what we eat rings true here – coupled with a bounce back of the fishing stock itself. We expect, therefore, to not only reach pre-2020 highs but exceed them in the short to medium term. To support this, we are exploring several

interesting avenues. One being that to ensure that our skills base keep pace with our expansion aspirations, we have extended in-house training of career oriented youngsters through a yearlong shore based exposure programme to familiarise candidates with back of house operations such as sales, marketing, sales and finance.

"The current crop of 16 trainees in Cape Town will be monitored and mentored, and as positions become available, promising candidates will be offered permanent positions within the company" he said.

The final word on the celebrations, however, goes to Premier's Chairman, Aziza Amod, a well-known businesswoman whose heart is firmly ensconced in the community, and who says: "The past seven decades have traversed two different centuries (20th and now the 21st). During that time, we have witnessed the landing on the moon, the dawning of a democratic South Africa, and an overnight switch to a digital world. But still, we do not know half of what lies beneath the depths of the waves, as we have yet to explore beyond a certain point.

"This makes fishing a daily adventure, something new with every breath of wind and rolling of the seas, at the mercy of nature and the elements. The one constant that has carried us through and continues to do so, is our people – our staff, our communities, our clients and all their families. It is to them I raise a toast to the next 70 years and more and say thank you!"

The celebrations of Premier Fishing's Platinum landmark will continue throughout the year ahead.



Counting the years of service: From the left: Rushaan Isaacs total 24 years, Sami Sedidi 35 years, Moesiena Anthony 37 years, Johan Pieters 35 years, Patrick Flepu 29 years, Maureen Smith total 45 years, with Sooren Ramdenee, CEO of Premier Fishing.

ABOUT PREMIER FISHING AND BRANDS

Founded in October 1952, Premier Fishing and Brands Limited (Pty) Ltd is a predominantly commercial fishing, fish processing and marketing company. Its range of activities involves some 850+ permanent and seasonal staff, as well as factories, facilities and vessels operating in three provinces. The Group has built partnerships with small companies particularly in the west coast rock lobster sector, where it assists these companies with the catching and marketing of their fish. This is in line with the group's fundamental principle of developing smaller black-owned companies as well as in investing into the communities within which it operates – particularly applicable to the support of its seasonal workers. This same principle extends across every aspect of the Group – develop long standing mutually beneficial relationships to build a nation, where all are valued. Sustainability First.



No.3 South Arm Road, Victoria & Alfred Basin, V&A Waterfront, Cape Town 8001
 t: +27 21 427 1400
 w: www.premierfishing.co.za

THE BEE IN MY BONNET COLUMN

Held to ransom and fleeced

IT is a widely held precept that cartels, like cancer, are not good for your health.

The practice in most countries in the world is outlawed and unlawful, as the actions of cartels hurt consumers primarily through increased prices.

Definitions supplied by Investopedia <https://www.investopedia.com/terms/o/opec.asp>, list the following key takeaways

A cartel is a collection of independent businesses or organizations that collude in order to manipulate the price of a product or service.

Cartels are competi-

tors in the same industry and seek to reduce that competition by controlling the price in agreement with one another.

Tactics used by cartels include reduction of supply, price-fixing, collusive bidding, and market carving.

In the majority of regions, cartels are considered illegal and promoters of anti-competitive practices.

The actions of cartels hurt consumers primarily through increased prices and lack of transparency.

Cartels therefore should be regarded as abhorrent and immoral but the world has little

choice but to tolerate the largest cartel, OPEC and its influential partners, known collectively as OPEC+, as they produce most of the oil and gas the world needs. Like it or lump it.

The organization was established in 1960 by its founding members Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela in response to the actions of the United States oil companies who had colluded to dominate the world's oil supply, aided and abetted by the US Government's support for a coup d'état to overthrow the government of Iraq, one of the major producers of oil,

in an attempt to support US oil domination.

As Investopedia point out, OPEC aims to regulate the supply of oil in order to set the price on the world market.

While OPEC does ensure that there is a steady supply of oil in the global market, it has come under fire for holding considerable power in the industry, which allows it to keep prices as high as possible.

Current OPEC members are Algeria, Angola, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, the Republic of the Congo, Saudi

Arabia, the United Arab Emirates and Venezuela.

OPEC have been bolstered with what is called OPEC+ - 'me too' producer countries who have joined the profit feeding frenzy. They comprise Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.

The UK is a good example of what can happen when insufficient investment is made in gas and oil production. In 2004, the UK's North Sea gas fields made the country self-sufficient in natu-

ral gas but output is falling, partly because too few new fields have been developed. The situation today is that these fields can only supply 50% of UK gas demand causing it to buy gas from the OPEC cartel which includes Russia. Removing Russia from the gas supply equation has sent prices soaring which in the UK resulted in a 700% increase compared to typical levels in the early part of 2021. To add to the catastrophe, the UK generates 41% of its electricity from gas fired power stations, so automatically the Brit-

ish public have had to endure a massive rise in the price of electricity too.

The UK and most of Europe have to 'suck it up' and have little option but to pay up if they want to keep the lights on and homes heated.

Being energy self-sufficient is the only way to combat what amounts to exploitation by OPEC and its cohorts and our government should take heed and be pulling out all the stops to pursue energy independence across the board.

Eish.

Improving order picking with robots



Mobile robot.

TOGETHER, shipping, receiving, and storage count for less

than half of all warehousing activity costs. The lion's share of

expenses- a whopping 55%- is bound in order picking. Breaking

down the various activities associated with order picking, we find that over 60% of the time is spent walking, with writing, searching, and picking tasks comprising the other 40%.

Given the data, it's safe to say that automating the "walking" portion of an order picking operation will have a strong positive impact on overall warehouse activity.

OMRON Logistics Strategic Account Manager, Yaqing Sun, recently discussed some strategies for us-

ing autonomous mobile robots (AMRs) for the purpose at the Automate 2022 show.

Let's take a look at a few methods for replacing unnecessary walking time with AMRs.

Strategy #1: Transporting items to employees ("Goods to person")

By having an AMR autonomously move goods to a warehouse associate, you can reduce the amount of time that associate spends walking, which

in turn reduces fatigue and generally improves work satisfaction.

In addition, it improves traceability by automating the QR code scanning process.

Some potential downsides of this method include high up-front investment costs, a relatively long integration and/or installation time, and the likelihood of infrastructure changes to the facility.

Still, logistics facilities by and large find that the productivity benefits heavily outweigh the initial costs of deployment.

Strategy #2: Transporting items between zones ("Person to goods")

This strategy involves breaking up the warehouse into separate order picking zones, each of which will have a dedicated employee. Since a single order might involve picking from more than one zone, an autonomous mobile robot will move between the zones, stopping whenever an employee needs to retrieve a particular item.

Although each employee still must do some walking, having AMRs traverse the long distances between zones, cuts down on the walking by a significant amount. The main downside of this method is that employees must still scan items manually, so traceability isn't fully automated.

Strategy #3: Transporting items to a robot ("Goods to robot")

This method has the dual advantages of high accuracy and low dependence on labour availability (making it a good option for companies struggling to hire personnel). Slight downsides include high investment costs and the possibility of lower throughput relative to manual picking.

Nonetheless, collaborative robotic technology is advancing by leaps and bounds, and solutions that connect an autonomous mobile robot with a cobot are going to just get more and more efficient. Furthermore, both AMRs and cobots can work around the clock with minimal downtime.

Continue to create in innovation driven by social needs with automation which empowers people

OMRON will catalyse advancement of manufacturing prepared to support a sustainable society. The focus is on enhancing productivity. OMRON will aim to build a production floor that shapes a sustainable future in harmony with the global environment and worker satisfaction.

Would you like to know more?
 +27 (0)11 579 2600
 info_sa@omron.com
 industrial.omron.co.za



**BEARINGS
INTERNATIONAL**

**Bearings & Seals
Chains & Sprockets
Electric Motors & Drives
Belts & Pulleys
Gearboxes & Couplings
Lubricants & Tools
Field Services**

**65
YEARS**

ALWAYS THERE, MAKING IT WORK



in numbers

43

Branches Nationally

85 Years

Cooper Bearing Distributor

Level 3

BBBEE status

More than 450

Employees in the BI Network

More than 43

Leading International Brands distributed by BI

More than 12 Million

Km's BI travels annually to get stock to our customers

More than 150

Technical Sales Engineers who offer Professional On-Site Service

More than 108 000

Cubic Metre of Warehouse

24

Hours of National Assistance

1891

J Hubert Davies started an Industrial Equipment Supply Business today known as Hudaco

More than 130 Thousand

Line Items listed

1957

Bearings International established and started trading

1963

Koyo Bearing Agency acquired from Koyo Seiko Company, Japan

1966

Hubert Davies buys out Engineering Trust. Company which was the holding company for G.H. Langler, Roger Jenkins, Bearings International and Charter Engineering and combined them to trade under Bearings International

1968

Bearings International opens Country Wide Depots

1978

Bearings International along with Duetz Diesel, Circle Pumps, Roller Chain and other supply companies are reorganised into Hubert Davies Engineering Supply Company shortly before getting acquired by Blue Circle Limited

1985

Hubert Davies Engineering Supply Company is bought from Blue Circle Limited by its management, now known as Hudaco Industries

2005

Bearings International was made an official FAG distributor

2012

Bearings International HO moved from 190 Barbara Rd to Parkhaven

2020

Bearings International signed up as Channel Partner with ABB

2022

Bearings International launches E-Commerce Store

a member of the **Hudaco** group



shop.bearings.co.za

Cape Town Air Access wins gold at World Routes 2022



The winning team: L-R: Charles Shilowa (Group Executive Strategy & Sustainability, ACSA), Mark Maclean (General Manager, Cape Town International Airport ACSA), Melissa Tarr (Aviation Marketing Coordinator, Cape Town Air Access), Paul van den Brink (Aviation Liaison, Cape Town Air Access), Portia Mdlalose (Acting Head of Global Trade Relations, South African Tourism), David King (Project Manager, Cape Town Air Access), Mpho Rambau (Traffic Development Specialist, ACSA).

THE Wesgro backed Cape Town Air Access (CTAA) project walked away with the Destination award at World Routes 2022 conference recently hosted in Las Vegas. With the awards ceremony comprised of seven categories totalling 1 000 collective nominations, this is the first time the CTAA project has won the award - following recognition as runner-up at World Routes 2018.

The World Routes event is the biggest route development conference in the world, with over 2 000 attendees present from the aviation industry. Nominated and judged by airlines, the awards ceremony is highly regarded, recognising the outstanding marketing services that have supported the launch of new air routes, and the development of existing services.

“With over 191 flights into Cape Town International Airport a week, from January 2023, we are looking forward to a bumper tourism summer season...”

“It is a great honour to receive the prestigious Destination Award at World Routes 2022.

“As a small project consisting of only five individuals competing against larger world-class destination authorities, the acknowledgement of this award indicates that our project has a winning formula. Bringing together key stakeholders across public and private sector, in both aviation, tourism and business - we are able to lean on each other’s strengths and collaborate for a

more competitive Western Cape. This has enabled us to lead the way for proactive route development in Africa and globally,” said Wesgro CEO and Official Spokesperson of Cape Town Air Access, Wrenelle Stander.

The Provincial Minister of Finance and Economic Opportunities, Mireille Wenger, adds: “With over 191 flights into Cape Town International Airport a week, from January 2023, we are looking forward to a bumper tourism summer season, and our focus is now firmly on ensuring that we are ready for this impressive growth.”

After only reaching 31% international passenger recovery in 2020 and 20% in 2021, Cape Town reached a year-to-date recovery of 65%, with July 2022 reaching 87% of 2019 levels. Air cargo vol-

umes have also recovered to 84% of 2019 levels (Jan-Jun).

Since March 2021, nine routes and four new destinations have been announced for Cape Town. The new routes include Airlink’s non-stop, three-weekly service from Maputo, Mozambique (31 August) and Air Belgium’s two-weekly, direct flight from Brussels, Belgium commencing 14 September. Amongst their many achievements this year, CTAA was subcontracted to assist

Airports Company Zimbabwe (ACZ) with establishing their route development initiatives at Victoria Falls (VFA) and Harare International Airport (HRE). This led to the first-ever direct intercontinental service starting to VFA when Eurowings Discover launched their Frankfurt (FRA) -VFA service on 30 March 2022.

CTAA has also assisted Kruger Mpumalanga International Airport (MQP) with route development over the past three years which has led to the first-ever Eurowings Discover direct intercontinental flight to MQP from France commencing 15 November 2022.

Through collective efforts, United Airlines will begin a non-stop, Washington DC (IAD) service on 18 November complementing their current year-round Newark (EWR) route to CPT, both as three-weekly services. Delta Air Lines will commence a daily four-weekly service to Atlanta, USA, on a triangular ATL-JNB-CPT ATL routing on 2 December, as well as three non-stop, direct flights between ATL-CPT on 18 December. This means that Cape Town will now enjoy 13 year-round flights per week to the USA compared to December 2019 when only three seasonal flights operated per week.

Finally, after exiting the destination in 2015, Virgin Atlantic will make their long-awaited return to CPT with a daily seasonal service from London, Heathrow starting IATA winter 2022/23.

BI celebrates its 65th anniversary with solid growth and expansion

Bearings International (BI) grew its countrywide distribution network by four branches this year alone and is looking to add a completely new complementary business unit to the existing four. This comes as BI celebrates its 65th anniversary in 2022.

“GROWTH into Africa has been good and sustained even during Covid-19 due to demand. It is just a matter of how we approach that market. We do not want to grow too quickly, as it must be sustainable growth giving us a solid foundation. I am very positive, however, and believe we will continue to go from strength to strength,” says BI MD Bart Schoevaerts.

At the helm of the business for two-and-a-half years, Schoevaerts came onboard during the difficult Covid-19 period. Designated an essential services provider, BI was able to operate during the lockdown and even continued with its restructuring process. “It was the ideal time to drive change in the business. Although we had grown significantly up to that point, the existing structure was insufficient to support ongoing growth.”

Service and Support

Schoevaerts reflects: “We had transformed from being a bearings company to supplying ancillary products from motors to fasteners. We stepped back to refocus and segmented the business into four distinct business units, each with its own operational structure. This, in turn, allowed us to look much more closely at our customer service and support.”

A company specialising in technical products invariably ends up with a technical mindset. “Today the market has evolved away from the traditional concept of technical support to one where customers are much savvier in terms of trends and latest developments. They are now inquiring if specific products and technology is available on the market and how quickly they can access it. This has meant we have had to adapt on the retail side of the business as well,” says Schoevaerts.

A mindset change

The renewed focus means ensuring sufficient stock of all the latest products at branch level. “That was a mindset change we drove throughout the organisation and one that has definitely resulted in significant growth.” Turnover has grown since Schoevaerts became MD and is expected to increase by more than 50% this year. “We achieved sig-



Bart Schoevaerts.

nificant growth in difficult circumstances and against a backdrop of global supply chain disruption by firstly the Covid-19 pandemic and then the conflict in Ukraine,” says Schoevaerts. “All of our products are imported, and we had to contend with issues such as ports being closed in China and no vessel or container availability.”

Another key factor has been price volatility. “Customers have been used to stable, incremental increases on a yearly basis but now are confronted with a situation where they have to review their cost basis at quarterly intervals to mitigate the impact of escalating prices,” notes Schoevaerts. A side-effect of this volatility has been a lot of smaller players falling by the wayside, which has separated the wheat from the chaff and levelled the playing field for the entire industry.

In the light of all these changes, and especially Covid-19 ushering in a digital or remote age, Schoevaerts says the traditional sales approach of physically visiting customers on a regular basis to introduce them to new technology or products and to gauge their specific requirements has given way to a new business model.

BI’s development of its own online portal

“If you see how quickly South African companies adapted to online shopping, from the retail to the commercial and industrial sectors, and how quickly they came up with new business models to remain relevant, we realised we had to go that route as well, even though we did not have any internal capacity at that time,” says Schoevaerts.

“I believe after successfully migrating to remote marketing we will end up at the point where

60% to 70% of our direct business-to-consumer and even business-to-business sales will be online,” Schoevaerts says proudly. This has largely been driven by BI’s development of its own online portal, a project that took longer than anticipated due to the steep learning curve. In addition, there is far more complexity in terms of choice and specification when it comes to industrial products.

He says the online portal is effectively “just another means of engaging with BI, over and above contacting our sales representatives or visiting your nearest branch.” An exciting development going forward is using the online platform itself to provide technical content to add further value to its customers’ businesses and projects.

“We believe this trend will only increase. As more and more businesses operate 24/7, there is a greater possibility of a breakdown or issue arising outside of normal operating hours when expertise and technical assistance may not be readily available.” In such a scenario, any parts required can be ordered online for expedited delivery so that customers can be up and running again as quickly as possible, thereby minimising costly downtime.

Being part of the larger Hudaco Group

A key strength of BI remains being part of the larger Hudaco Group. “It is a definite advantage in Africa due to economies of scale. Major customers such as the mining industry and breweries are more likely to see us as a trusted partner into Africa. The advantages we offer being part of a larger group are security of supply and financial stability of the overall business,” says Schoevaerts.

The group largely

operated in a decentralised fashion up to Covid-19 when it realised there was more value to be extracted from each individual company. Clusters were formed, with BI in the materials handling cluster along with another five companies in the Hudaco Group. “Adopting such a strategy will deliver distinct advantages for us in future. The group will remain decentralised, but cooperate and collaborate on a bilateral level,” says Schoevaerts.

Always There Making It Work

Reflecting on the 65th anniversary, Schoevaerts acknowledges it is a milestone. “It is something we are very proud of. Our slogan is ‘Always There Making It Work’ and everyone considers this in their own sphere of operations. That has contributed towards our ongoing success. We have remained a family type of business but with the outlook of a big corporate. In South Africa and on the continent, that is valued.”

A key part of this strategy is BI’s three-tiered approach to any product it distributes. “We have really tried to bring the world to South Africa through our leading brands, which has been a focus since day one,” says Schoevaerts. However, “not everyone wants a Rolls Royce product.” In terms of energy-efficient motors, for example, BI offers high-end IE3 and IE1 at the lower end.

Looking to the future, Schoevaerts says customers are increasingly looking to outsource their maintenance requirements as a non-core part of their businesses. This has resulted in BI collaborating with project houses and consultants.

“Here we maintain a purely technical relationship whereby we share innovative new products and technology so that they can anticipate developments and consolidate these into their own design work for industry, manufacturing and mining. Obviously building such relationships bolsters our own credibility and on the back end of such partnerships we get a lot of business,” says Schoevaerts. “It is important to bring new technology to the market and we have indeed launched several new products over the years and continue to do so,” he concludes.

For more information visit: www.bearings.co.za

4 RECALIBRATION TACTICS TO DRIVE GROWTH FOR MANUFACTURERS AND DISTRIBUTORS

By *Jaco Maritz, Chief Executive Officer, SYSPRO*



Ever-evolving customer demands, and increasingly challenging market conditions have kept many manufacturers and distributors on their toes. Navigating this landscape requires business leaders to take a step back, reassess the bigger picture with their company purpose in mind, and adjust where necessary to steer their organization towards success. The manufacturing and distribution sector is working through a re-tooling from economic factors and workforce displacement to a new era of digital technologies. Now is the time to refocus on activities that will balance your risks with your projected rewards. Decision-makers looking to channel this growth mindset should consider adopting these recalibration tactics to drive growth and maintain relevance.

■ TACTIC 1: INNOVATING WITH COST-SAVING STRATEGIES

One of the top economic concerns impacting business productivity and profitability is rising inflation, driven by several factors, including the ongoing geopolitical volatility. Many manufacturing and distribution industries are feeling the burn, with costs for materials, goods, shipping and more soaring, impacting their operating costs, output levels and, ultimately, their bottom line.

These industries have had to innovate with cost-savvy strategies to remain competitive and, indeed, to stay afloat. For some, this has meant leveraging technology to automate certain labor- and time-intensive tasks to lessen the number of hours and associated costs spent on task completion. Other businesses have been buying inventory in bulk with the view that these costs will continue to rise. However, as consultancy firm CFO Selections warns, this may be a risky move – in the short-term, it means restricted cash flow. These funds could be channeled elsewhere to better drive cost efficiencies, or they might be needed to respond to unforeseen costs due to further economic or climate crises. Plus, adds the firm, there's the more obvious risk associated with an excess in the scenario where purchased inventory isn't used quickly enough – think "spoilage, deterioration, damage, theft, or obsolescence".

I believe that business leaders opting for automation as a driver of cost efficiency are placing a safer bet, especially because this means they're building business resilience to economic shocks in the long-term. Technology like ERP software is making this possible. For starters, something as simple as automating time-draining admin processes using ERP could reduce labor costs, for example. Furthermore, organizations are better equipped to streamline how they work, thanks to real-time, data-driven insights into critical business processes through the consolidated, end-to-end overview an ERP platform provides. For instance, inventory procurement managed through this system can strengthen purchasing efficiency, helping to keep business spend in check, as one SYSPRO client's experience shows. Leveraging our ERP technology, Ruprecht, a leading American food-solutions company, expects to save up to \$2 million in annual operating costs with the help of the ERP's built-in artificial intelligence (AI). The AI-based predictive modeling informs their decision making around many parts of the business. One focus area is inventory procurement: since implementing SYSPRO ERP, they've been able to maintain a sustainable, stable supply source, which they did even at the height of the pandemic.

■ TACTIC 2: EMBRACING SMART TECHNOLOGY

Intelligence around customer-buying patterns, market-trends forecasting, and effective risk-management planning. These are just some of the benefits a business can reap from an accurate, real-time source of data. This source enables an organization to better absorb macro-economic shocks brought about by changes like a health pandemic or war, and localized operational shocks, like equipment failures, in a proactive manner that boosts agility and therefore productivity and cost efficiency, too.

The key to harnessing this agility lies in data extraction and management, which is where smart technology comes in. Chatbots, rooted in AI technology, are a great way to automate intelligent data sourcing. A feature of ERP, AI-based tools can retrieve business-relevant insights from their environments, such as through interactions with your customers, to inform decision-making around functions like marketing, sales and more. Beyond this, chatbots (or digital citizens, as we like to call them) can free-up crucial human resources to answer customer queries and analyze customer interactions to predict future needs for a better client experience. They can also assist internal business users on time-intensive tasks like stock lookups or ordering status, creating efficiencies that ultimately help improve productivity and revenue.

SYSPRO Thought Leadership

■ TACTIC 3: TAKING ADVANTAGE OF SHIFTING EMPLOYMENT TRENDS

Remote and hybrid working are here to stay, but these employment trends needn't dampen business continuity or productivity. In fact, I believe it's quite the opposite. It's clear that business leaders and their employees need to be productive no matter where they're working from (on or off business premises), with access to real-time data to guide informed decision making. For example, in a scenario where a business is engaging with a customer off-site, having instant access to up-to-the-minute sales and service information to address concerns or confidently respond to queries is crucial to maintaining that client relationship.

Unsurprisingly, digital transformation is how businesses are taking advantage of the on-the-go nature of today's working environment. Manufacturers and distributors who have digitalized operations with mobile ERP technology have boosted business agility by empowering staff. Their teams can securely access and control a multitude of processes in real time – planning, forecasting, budgeting, targeting, scheduling, accounts, purchase orders, inventory, sales, workflow, asset management, reporting and analytics – right from their smartphone, anytime and anywhere. Investments like this are helping give these businesses a competitive edge that sets them apart.

■ TACTIC 4: PRIORITIZING VULNERABILITY MANAGEMENT AS A CYBERSECURITY MEASURE

Of course, business downtime isn't only caused by factory equipment failure. With more industries digitizing operations to keep up with demand, the threat of cyberattacks is a rapidly growing one. Without proper cybersecurity measures and regular reviews of security vulnerabilities (which can change quickly as hackers find new ways to unleash their attacks), these companies could become targets. This not only leads to business downtime but could also result in a loss of protected data and customer loyalty, reputational damage and more.

Manufacturers in particular have serious cause for concern. The recently published IBM threat intelligence report revealed that this sector overtook financial services as the most targeted by cybercriminals in 2021. The report added that nearly half of all cyberattacks on manufacturers were the result of security vulnerabilities that "hadn't yet or couldn't be patched", which, the report continues, highlights "the need for organizations to prioritize vulnerability management".

Keeping this advice in mind, manufacturers would be wise to earmark part of their budget to secure vulnerability management (VM) applications from a reputable cybersecurity provider. VMs scan the business's IT assets to flag any weaknesses requiring immediate security interventions. It's an upfront cost that will deliver on its investment in the long-term by reducing the (potentially financially crippling) risk of cyberattacks.

Future-proofing is the goal of any savvy business. To realize this goal, business decision-makers must take a strategic approach, which this article helps to shape. Recalibrating requires innovative cost-saving that doesn't come at the expense of quality service delivery. Cost reductions, in turn, can be achieved through short-term investments in smart technology that deliver big payouts in the long-term. This smart technology automates business-critical processes to free-up valuable human resources who can channel their insights into other revenue-generating activities. This technology also guides informed decision-making through predictive modeling, ensuring a business is prepared to tackle potential risks. Lastly, speaking of risks, business leaders must balance progress against vulnerability. That's why I strongly suggest you examine your cybersecurity risk to ensure the benefit that technology has unleashed is not outweighed by the financial fallout of a cyberattack. To sum up, your recalibration for success must be driven by responsible investments in technology. This is how you remain competitive and relevant in a world defined by change. ■

 **SYSPRO**[™]
Say Yes to Next

For more information, visit www.syspro.com

Health, safety and environment create new job opportunities

By Eloise Nolte, MD of College SA



NEVER before in history has there been such a heightened awareness around why our health and environment are so important.

As a result, businesses in South Africa have had to ensure their Occupational Health and Safety (OHS) measures, as well as the environmental impact of their business, are carefully considered. As businesses have had to expand their focus into these areas, there is now a fast-growing need for individuals to fulfil job roles in this space.

These opportunities include, for instance, openings for safety officers, environmental protection officers, and health and safety managers, among many more.

With just a Grade 10

qualification, and the ability to read and write proficiently in English, one would be eligible to study internationally-recognised courses that can lead to becoming an Occupational Health and Safety representative or coordinator in the workplace, or as an Environmental Manager.

A further explanation of these skills and their associated globally-accredited courses are listed below.

Occupational Health and Safety representative

An occupational health and safety representative not only puts health and safety systems in place, but they also investigate accidents that occur in the workplace, carry out risk assessments, and boost employee well-being, among many other facets.

The kind of course that a learner can take to pursue this type of career would be, for example, the UK's National Examination Board in Occupational Safety and Health (NEBOSH) International General Certificate (IGC) in Occupational Health and Safety.

This particular certificated is the most trusted health and safety quali-

fication of its kind in the world, and it can be applied in many sectors. The syllabus has been developed by NEBOSH following extensive consultation with key stakeholders in the industry. It was launched in 2006 and there are now over 90 000 people worldwide who have passed this qualification.

This qualification requires a Grade 10, and it takes up to 8 months to complete. Optimi College is a Gold Learning Partner of NEBOSH and provides this internationally-recognised accreditation to learners in South Africa. Getting a NEBOSH qualification further enables you to pursue jobs in both South Africa and other countries around the world.

Environmental Managers

Another key course from NEBOSH – which is now available in South Africa via Optimi College – is that of its Certificate in Environmental Management. This qualification enables one to recognise which workplace activities may be subject to environmental legislation or enforcement and assess environmental aspects and impacts.

It further provides

learners with knowledge in evaluating existing controls, supporting environmental emergency planning as well as understanding the importance of reducing environmental harm.

This reputable qualification also only requires learners to have up to a Grade 10 qualification and takes up to 6 months to complete. It is designed to be globally relevant and benefit companies in all industry sectors which are seeking to implement effective environmental management systems, increase positive environmental impacts, and reduce negative environmental impacts.

Both of these career paths, strengthened by NEBOSH qualifications, present effective ways to gain employment, both locally in South Africa, and across the globe, in a world that is rapidly changing around us.

There's no doubt that with future challenges on the horizon, this will continue to become an important part of the workplace. It also presents an opportunity to help reduce unemployment in South Africa, while protecting our health, safety and environment.

UN International Day - an opportunity to renew local disaster preparedness



Picture credit: Mail & Guardian.

THE Western Cape like provinces and regional governments across the world needs to build resilience and disaster preparedness in the face of our current reality of climate change, global instability, rapid urbanisation, and the South African catastrophe of a growing energy crisis, and poverty and unemployment, which are root causes of social instability and outbreaks of violence and crime.

Anton Bredell, Western Cape Minister of Local Government, Environmental Affairs and Development Planning said on the United Nation's International Day for Disaster Risk Reduction, that it provided the opportunity to renew our local preparedness for disasters, as well as plans for risk reduction during unforeseen events.

South Africa is one of 187 countries that signed and agreed to the Sendai Framework's goals of significant reductions to loss of life and livelihoods caused by disasters by 2030. The Framework is also aligned to the United Nations Sustainable Development Goals, as well as the Paris Agreement on Climate Change.

Bredell said: "Since 2000, The Western Cape experienced 19 major floods and two significant droughts, with the 2018 drought and the threat of Day Zero still firmly in our memories. Fires occur

on a yearly basis with the most severe being the Knysna Fire in July 2017. The Province also has had to deal with the unacceptable attacks on foreign nationals in 2008 and the Covid-19 pandemic from 2020 to 2022."

Preparing for climate related disasters, the Western Cape uses an Impact Based Weather Warning System, based on seasonal and daily forecasts from the South African Weather Services. "Seasonal forecasts are used to anticipate future droughts and assist with the planning of proactive water saving measures. Daily forecasts are valuable for anticipating events such as floods, or conditions favourable for wildfires, especially during the summer months. This information also enables first responders such as Emergency Medical Services, Fire and Rescue, as well as Safety and Security Services, to prepare and respond to emergencies.

Bredell said the Provincial Disaster Management Centre has a dedicated unit responsible for the distribution of warning information to all relevant stakeholders, including municipalities and Provincial Departments.

Climate related disasters have a direct impact on the agricultural sector, which is a critical cog of the Western Cape's economy.

According to Ivan

Meyer, Western Cape Minister of Agriculture, the Western Cape has been experiencing an increase in the intensity and frequency of disasters over the last ten years.

Meyer said: "For this reason, the Western Cape Department of Agriculture (WCDoA) provides agricultural disaster risk reduction (prevention, mitigation, preparedness, response and relief) support services to producers and other clients. These include support to farmers affected by drought, floods and pests."

"The R48.1 million allocated towards fodder support meant that the Western Cape could offer approximately 1 450 farmers fodder support for three consecutive months this year. In addition, the WCDoA issued seed vouchers valued at R324 000 to 29 farmers in drought areas that have shown signs of recovery. The aim is to support veld restoration", added Meyer.

Recently, locust outbreaks in parts of the Western Cape have become a worrying factor for local farmers.

Meyer said: "The Department responded to the recent locust outbreak by allocating R4.9 million towards procuring 100 sets of Personal Protective Equipment such as gloves, masks, boots, overalls and 49 sprayers and 11 800 litres of pesticide".

Circular economy ambitions to power new era of sustainable manufacturing and consumption



STELLANTIS N.V. the multinational automotive manufacturing corporation comprising the Italian-American conglomerate Fiat Chrysler Automobiles and the French PSA Group, has announced a comprehensive plan for its Circular Economy Business Unit to achieve more than R2 billion in revenues by 2030 and drive the Company's aggressive decarbonisation target of reaching carbon net zero by 2038.

Circular Economy's 4R Strategy:

Stellantis has devel-

oped a comprehensive, 360-degree business based on the 4R strategy: reman, repair, reuse, and recycle. It's an integrated ecosystem that is vital to preserving and protecting the planet's resources.

- Reman – Used, worn or defective parts are thoroughly dismantled, cleaned and remanufactured to OEM specifications. Nearly 12,000 parts covering 40 product lines, including electric vehicle batteries, are available.
- Repair – Worn parts are repaired and

reinstalled into customers' vehicles. In 21 locations around the world, e-repair centres work on electric vehicle batteries.

- Reuse – Approximately 4.5 million multi-brand parts in inventory, still in good condition, are recovered from end-of-life vehicles and sold in 155 countries through the B-Parts e-commerce platform.
- Recycle – Production scraps and end-of-life vehicles are fed back into the manufacturing process. In just six months, the

business unit has collected 1 million recycled parts.

In addition to circular economy hubs, the business unit will use 'local loops,' to keep products and materials within countries, speeding deliveries for customers. In Brazil, key parts, i.e., starter motors and alternators from Stellantis brand vehicles, are remanufactured, distributed and sold across 1,000 local dealerships – supporting the Circular Economy philosophy and the drive to carbon net zero.

CAPE
Business News
ESTABLISHED 1980

Visit www.cbn.co.za for daily Cape Business News updates

1.5 Degrees, Africa's net zero conference and exhibition

28-30 March 2023, Century City Conference Centre and Precinct, Cape Town.

TO many who have attended conferences and exhibitions over the years, they all seem to follow the same pattern – just the size and duration that differs.

This one however is different and promises to be a radical and welcome departure from the same old.

Staged by expert events manager Lynn Chamier, with more than 36 years in the events business, her vision for this event takes climate change, recycling and sustainability to its logical conclusion – even delegate's name cards will be made from recycled paper and embedded with seeds that can be planted after the event!

Lynn describes the experience as 'Africa's inaugural climate change event', which brings together not only government officials, experts and purveyors of sustainable technology, but also the general public – as climate change affects us all. Entrance is free for the entire three days to the expo and climate change village Experience!

Conference

"I have assembled a committee of specialists and experts from affected industries to advise on the composition of this high level conference, who and from where speakers will be drawn, not only from South Africa but from countries that make up the African continent" explains Lynn. "A feature of the conference will be a report back on COP 27 - the 2022 United Nations Climate Change Conference, to be held from 6 to 18 November 2022 in Sharm El Sheikh, Egypt. We realise the importance of this event and many will likely be deterred from attending due to cost considerations, but here, they can get the key take aways!"

Exhibition

"Our exhibition will be like no other, and has pricked the interest of a broad range of commercial and financial entities – from leading banks, major retailers Pick n Pay, starts ups like Curbon, Technology partner SAP keen to show off their green credentials and Electric vehicle manufacturers such as Jaguar Land Rover who want to display their programme of sustainability to a largely unknowing public. "The usual large scale displays are banned on

environmental grounds – often wastefully constructed and then discarded after the event – in favour of a range of shell schemes designed by local entrepreneur Xanita and made from recycled cardboard and delivered flat pack style in a box. After the event, the stand can be reused

up to 14 times or can be donated to needy charities or NGO's – nothing is wasted!

Experience

"Running alongside the conference and exhibition will be what we call 'The Village', designed to create an

environment where the public and delegates can experience climate change, engage with suppliers, creatives and like-minded individuals, educate themselves on sustainable living and evolve into climate change champions to be part of the change! Activities will include:

- Recycled art installations
- Outdoor EV mobility park display
- Local recycled goods and art vendors
- Intaka island tours
- Sustainable building tours
- Gin and wine tasting
- Park run
- Eco and sustainable goods night market
- Sustainable living talks on understanding
- solar power
- wind Power
- water harvesting
- composting and aquaculture

"All in all, a completely novel experience awaits!"

For more information visit: www.onepointfivedegrees.co.za

Official Invitation.

One point five degrees officially invites you to participate in the inaugural African continent climate change event. In Africa, about Africa, by Africans.



Conference

3 Days of engaging high profile conferencing presented by African dignitaries, captains of industry and climate change champions.



Exhibition

100 exhibitors displaying climate change technologies services and innovations.



Climate change village

Climate change village showcasing Ev mobility, Recycled art, Intaka Island tours, Sustainable building tours, Recycled art installations, Sustainable product market and much more!



Sponsor • Exhibit • Attend

CAPE Business News
Where industry speaks to industry

"we are delighted to announce that Cape business News has been appointed as the "OFFICIAL MEDIA PARTNER"

Contact : Lynn Chamier lynn@onepointfivedegrees.co.za www.onepointfivedegrees.co.za

Gas exactly where it's needed

Prime location, long life, exploration upside.

THE Mpumalanga Project, 100%-owned by gas explorer/developer Kinetiko (KKO), is located ~200km southeast of Johannesburg. The project sits within existing infrastructure including power generation, gas pipelines, high voltage transmission lines, road and rail. The project hosts a 2C contingent gas resource of 4.9 trillion cubic feet (Tcf), found in shallow sandstone and coal formations, indicating a potential long life gas development.

Gas has been identified in every exploration hole drilled to date. KKO has engaged independent gas certification group Sproule to independently evaluate the gas reserves. The project covers ~7,000 km² with 4,604 km² of granted exploration rights and over 2,300 km² under application. Only a fraction of the project area has

Existing wells at Mpumalanga will be utilised to produce gas powering an in-field generator linked to the existing grid.

been explored, presenting KKO with the potential to expand resources significantly through further exploration.

Near-term production: Gas to Power

KKO has a joint venture with highly experienced gas-to-power (GTP) partner Vutomi Energy. Existing wells at Mpumalanga will be utilised to produce gas powering an in-field generator linked to the existing grid. Further phases are planned to increase output.

Long-term production:

SA energy crisis creates multiple options for gas sales for KKO SA's ageing and under-invested power gener-

ation (predominantly coal) infrastructure, declining domestic offshore and imported onshore gas supply and the existence of only one approved onshore gas producer reflects a nation facing a significant energy crisis.

Solutions have to be found, such as gas to power; compressed natural gas (CNG) for transport; liquefied natural gas (LNG) for transport, power and industry; or just simple pipeline gas. KKO is in the enviable position of being part of both a short and long-term, lower-carbon solution to SA's energy needs. Successful demonstration of production should lead to staged project expansion.

The project's location and supportive gov-

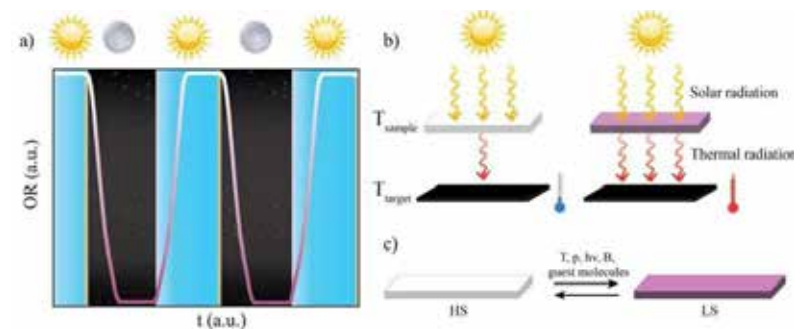
ernment policy present further options for gas sales to state-owned power stations, industrial users and transportation.

Quality partners reflects a quality project

In addition to Vutomi Energy, KKO has entered into a joint development agreement (45% IDC/55% KKO JV) with SA's Industrial Development Corporation (IDC) to develop a 15 to 20-well pilot production field.

Additionally, the IDC has a first right to participate up to 45% of the next 80 wells developed by KKO. The IDC JV has been funded predominantly by a subscription of R60m from SA energy investment group Phefo Power, which boosts KKO's Black Economic Empowerment (BEE) certification.

Temperature fluctuation control with a switchable spin-crossover material



a) Scheme of the behaviour of a SCO material during day-night cycles. b) Working scheme of a SCO material under solar radiation. When the weather is hot, and the material is in its HS state (white), the light is reflected and the increase in the temperature of the room is controlled. On the contrary, under cold temperatures, the materials show the LS state (pink), so more wavelengths are absorbed and the room is heated. c) Illustration of the spin transition under external stimuli. Credit: *Advanced Science* (2022). DOI: 10.1002/advs.202202253.

By Elena Alonso-Redondo, IMDEA Nanociencia

ALLEVIATING the heat-island effect through thermal regulation mechanisms in building elements can improve human thermal comfort and the living environment in urban areas. Passive thermal regulation systems incorporated with roofs, windows or walls, and operating without the need for electricity, are an energy-efficient and environmentally sustainable solution.

Phase changing materials minimize temperature fluctuations through the use of latent heat, but have some limitations. The application of these techniques has resulted in cooling during both day and night. Therefore, research into new materials that reduce temperature fluctuations in both directions is required.

Researchers led by Dr. José Sánchez-Costa and Dr. Ana Espinosa

at IMDEA Nanociencia have demonstrated that molecular materials can be applied for thermal regulation purposes in a novel approach. In their latest work, published in *Advanced Science*, the group tested molecular-based coordination polymers embedded in plastic matrices against several heating-cooling cycles.

They observed a concomitant phase transition and colour change, from pink to white, that resulted in a cooling effect respect to other thermochromic materials. The measured temperatures indicated that the heated material was able to dissipate heat more efficiently via two effects: energy absorption that triggers the phase transition and optical reflection due to colour change toward white—reflecting more energy. Furthermore, the cooled material (pink) produced a dampening of the temperature decrease due to the desorption of heat produced in the phase

transition. This translates into lower temperature fluctuation during heating and cooling cycles.

The spin-crossover molecule materials were remarkably stable upon cycling; in this study, up to 40 cycles were performed, producing similar results. These versatile materials can be designed for specific properties, such as transition temperature and thermal hysteresis.

In this study, the researchers demonstrate that the heat generated by the sun is sufficient to produce spin transition in a spin-crossover material. This, in turn, leads to a cooling effect due to an increase in light reflection resulting from the colour change and the energy absorption associated with the spin transition. Therefore, spin-crossover molecular materials could be used to reduce temperature fluctuations, and could be potentially implemented in passive temperature control elements in buildings.

Aussie startup claims 95% H2 electrolysis efficiency

AUSTRALIAN company Hysata's advanced hydrogen electrolyser technology has attracted A\$42.5 million from global investors. Virescent Ventures led the funding round on behalf of the Clean Energy Finance Corporation (CEFC) (Aus), with participation from Kiko Ventures (UK), IP Group Australia, Vestas Ventures (Denmark), Hostplus (Aus) and BlueScope (via its ventures arm BlueScopeX TM) (Aus).

The Hysata electrolyser operates at 95% system efficiency (41.5 kWh/kg), delivering a giant leap in perfor-

mance and cost over incumbent technologies, which typically operate at 75% or less. This high efficiency, coupled with the simple approach to mass manufacturing and low supply chain risk promises to deliver the world's lowest cost green hydrogen.

Funding from the Series A round will be used to grow the Hysata team and develop a pilot manufacturing facility.

"Our mission is to redefine the economics of green hydrogen production through our innovative proprietary electrolyser technology. The support of

this international syndicate of clean energy practitioners and investors validates our core technology and our approach to scaling and mass manufacture," said Paul Barrett, CEO of Hysata.

"Green hydrogen is a vital energy vector on the world's path to net zero, critical to decarbonising the hard-to-abate, yet vital, sectors of our economy such as steelmaking, heavy transport, and the chemical industry. The extensive end use cases for green hydrogen translate to a greater than trillion-dollar market opportunity.

Multicode reader verifies and analyses codes and text



Universal solution for production and logistics

The O2I multicode reader detects 1D and 2D codes as well as text elements and analyses their quality within a few milliseconds. The number of elements to be detected is irrelevant as the O2I can evaluate several codes or text elements as well as their combination with only one image capture. This makes the multicode reader a universal solution in production and logistics processes where the presence of codes and text information is to be checked for quality or used for product tracking.

The O2I can be quickly set up for simple applications directly on the device. More complex tasks can be implemented just as easily by means of the award-winning ifm Vision Assistant.



Tel: +27 12 450 0400
www.ifm.com/za



Education and due diligence - critical before investing in alternative energy

THE ongoing energy crisis in South Africa has placed households and businesses in a predicament, with an increased urgency to supplement energy requirements, which is driving the demand for solutions in the renewable energy space. However, Svilen Voychev, CEO of Valsa Trading, strongly recommends that households and businesses conduct a due diligence process before investing capital into any alternate energy solutions.



Svilen Voychev.

Valsa Trading is a photovoltaic (PV) solar system manufacturer and distributor, supplying PV solar mounting system solutions to resellers, installers and clients installing solar systems for businesses across South Africa and into Africa.

“Do you need less energy for longer hours or high energy for shorter periods?”

Voychev emphasizes that customers need to understand what energy solution will best suit their needs. “Do you need less energy for longer hours or high energy for shorter periods? One must also ensure that installers understand this information and provide the appropriate guidance.”

“To businesses to remain competitive, investing in alternative energy solutions is a necessity. Business owners must investigate the financial viability of their investment, and whether the solutions meets their operational requirements not just

for the short term, but provides a return on investment over the long-term.”

Choosing a fit-for-purpose alternative energy solution is a complex task

Designing the energy solution is a scientific process that factors in the climate, energy products, customer energy requirements and compliance and support, not only the initial capital investment,” he adds.

For example, when customers choose a battery storage solution, one should consider the battery rating, such as charge and discharge rate or C rating. The C rate indicates the service rate for the specified battery and the time it takes to charge and discharge.

“Lithium batteries can tolerate much higher discharge C rates than alkaline batteries. In contrast, lead acid batteries are rated low on discharge rates. Further, it is imperative that installers are adequately educated to inform customers of a battery’s performance, type, or application.

“A customer or an

installer, in most cases, may lean towards cheaper batteries. However, the cost must not be the factor that trumps all other considerations. It is important to pay attention to battery performance; installer compliance; the warranty from the manufacturer; and support after installation by both the manufacturer and installer,” explains Voychev.

He also adds that the solar PV system can be complemented with a battery storage solution as an excellent alternative energy package because it enables businesses to shift consumption during peak hours. The battery storage then plays a pivotal role in the businesses’ energy mix.

“Further, the cost of battery storage has declined as technology has improved, and this can be used with the solar solution to reduce the use of generators which suffer from high operational and running costs. Valsa now supplies a range of battery storage solutions.

“Before looking at the initial capital investment, customers should understand and seek expert advice and guidance on the energy solutions that would fit their specific needs. Be aware of what you’re investing in and conduct professional due diligence. The correct decision will undoubtedly pay off, and you will benefit from your investment,” Voychev concludes.

For more information contact: Anrie Breed Lombard, Tel: 081 469 8646 or Email: marketing@valsa.co.za

MDB increase climate change finance to over \$51bn in 2021

CLIMATE finance committed by major multilateral development banks (MDBs) rose in 2021 with over \$19 billion committed to climate change adaptation finance, according to the Joint Report (<https://bit.ly/3ThNThd>) on Multilateral Development Banks’.

The report tracks the progress of MDBs in relation to their climate finance targets such as those announced at COP21 and the greater ambition pledged for the post-2020 period.

The report finds that total financing commitment by MDBs to low-income and middle income economies in 2021 of \$50.666 billion, surpassed the annual expectations of \$50 billion set in 2019 (<https://bit.ly/3S5CbVC>) at the UN Secretary Gen-

eral’s Climate Action Summit in New York.

Of this amount, \$47.24 billion was from the MDBs’ own account and \$3.426 billion from external resources that were channelled through the banks. Mitigation finance committed to low- and middle-income economies totalled \$33.055 billion, or 65%, while adaptation finance totalled \$17.611 billion, or 35%.

The 2019 goals projected a collective total of \$50 billion for low- and middle-income economies and at least \$65 billion of climate finance globally, with an estimated doubling of adaptation finance to \$18 billion and private mobilization of \$40 billion.

The report also records a notable increase in adaptation

finance to over \$19 billion in 2021, again beating expectations. A total of \$19.187 billion was committed to climate change adaptation finance, with \$17.611 billion, or 92%, committed to low- and middle- income economies, thus surpassing the expected collective delivery of increasing adaptation finance to \$18 billion.

Kevin Kariuki, Vice President of Power, Energy, Climate and Green Growth at the African Development Bank, commented: “As MDBs, we have steadily grown the amount, and access to climate finance over the last decade, thereby demonstrating the potential of multilateralism in tackling global threats. However, this is not near enough, and efforts to ramp-up the quantum of and rate

of access to, global climate finance, especially adaptation finance, in developing countries are necessary”. He added, “This is why we have established flagship programmes such as the \$25 billion African Adaptation Acceleration Program and the \$20 billion Desert-to-Power, to accelerate climate action, while safeguarding the well-being of our people and nature”.

The African Development Bank’s contribution to climate finance in 2021 stood at \$2.49 billion or 41% of all Bank investment approvals. Of this amount, the proportion of climate adaptation grew to 67%, which evidences the Bank’s commitment to supporting its regional member countries build adaptive capacity and climate resilience.

HELUKABEL®
CABLES • WIRES • ACCESSORIES

(Channeling POWER)

1052 Schooner Ave, Laser Park, Honeydew, Gauteng
 JHB +27(0) 11 462 8752
 KZN +27(0) 81 577 7375
 CPT +27(0) 82 480 5451
sales@helukabel.co.za
www.helukabel.co.za
 HELUKABEL SOUTH AFRICA
 HELUKABEL_ZA

VALSA
SUSTAINABILITY SOLUTIONS

TURNKEY SOLAR SUPPLIER

- ▶ PV SOLAR PANELS
- ▶ INVERTERS
- ▶ MOUNTING STRUCTURES
- ▶ BATTERIES
- ▶ COMBINER BOXES
- ▶ CABLING
- ▶ PV SOLAR KITS
- ▶ PV SOLAR DESIGNS
- ▶ TOOLS
- ▶ ALL ELECTRICAL COMPONENTS

SIMPLE & COST EFFECTIVE SOLUTIONS

Call 011 794 1306 Email info@valsa.co.za www.valsa.co.za

Advertorial

Renewable Energy Sources

“NOTHING is more environment-friendly than receiving energy directly from the sun. This is our commitment to solar technology,” says Siegbert Lapp, a member of the board of Lapp Holding AG. The fact that we recognised the potential of this market very early on and have built up specialist expertise in this area demonstrates

once again the innovative tradition of our company. Our offering ranges from developing tailored products to advising you on planning and conversion matters. After taking into account the full range of operational requirements, LAPP offers a specifically tailored comprehensive range of cables, connectors and photo-

voltaic accessories for cabling photovoltaic plants – we are the system of choice! In collaboration with users, the TÜV (German Association for Technical Inspection) and the North American UL approval organisation, a variety of tests have been carried out on our ÖLFLEX® cables, SOLAR cables, SKINTOP® cable

glands and EPIC® SOLAR connectors to guarantee the highest quality standards. Our products can be used throughout the world and naturally also comply with the RoHS directive.

At the world exhibition in Milan, Expo, the German pavilion was grabbing the visitors’ attention with its energy-generating solar trees. These solar trees integrate organic photovoltaics (OPV) technology and, unlike conventional solar modules, are made from flexible, film-integrated OPV modules.

The revolutionary connection technology needed to produce these comes from Stuttgart-based LAPP. For over ten years, LAPP has been successfully developing



connection systems for photovoltaic modules and has regularly pushed the market forward with its intelligent innovations, for example, the well-known connector system EPIC® SOLAR and the cable series ÖLFLEX® SOLAR. The OPV modules and the innovative connections are made from one cast – unlike with conventional photo-

voltaic modules, there is no longer a junction box attached; instead, there is a so-called access point that is cast directly onto the flexible OPV film and merges with the film. This method prevents capillary action and therefore also damage due to corrosion. Additionally, the connection components are, at only 30 mm x 20 mm, considerably

smaller than those in conventional systems. The cables to be used by the modules were also selected according to customer-specific requirements and are only 2mm wide. They have been produced in grey for use on the German pavilion so that they can be integrated virtually unnoticeably into the grey wire braiding of the design components.

LAPP

Solar energy powered by LAPP

Solar Cable H1Z2Z2-K

- efficient cables and components for high system voltage
- especially weather resistant against heat, wind and frost
 - long durability • robustness • extreme flexibility • available with cable protection.

Whether it's solar units for family homes or industrial-scale plants - Lapp supplies a whole range of products specifically tailored to photovoltaic systems from cables, connectors and accessories right up to the complete wiring of all plant types.

MORE INFO

011 201 3200
www.lappgroup.co.za
info.za.lza@lapp.com

Hitachi Energy to secure power supply in Africa's longest HVDC link



HITACHI Energy has signed a long-term service agreement with Société Nationale d'Electricité (SNEL), the national electricity company of the Democratic Republic of Congo, to secure power supply in the country's most important power transmission asset: the Inga-Kolwezi high-voltage direct current (HVDC) link.

The link supplies up to 1 000 megawatts of emission-free electricity from the Inga Falls hydropower plant in the far west of the country to the Kolwezi mining region in the south. With a length of 1 700km, it is the longest HVDC link in Africa. It also enables the Democratic

Republic of Congo to export surplus power to the member countries of the Southern African Power Pool.

“Hitachi Energy has been a close and valued partner of SNEL for almost 50 years...”

The agreement continues the close collaboration between SNEL and Hitachi Energy over the past 40 years to ensure the link operates at maximum availability and reliability over its long operating life.

Hitachi Energy supplied the two converter stations at either end of the link in 1982 and has subsequently upgraded them and

doubled transmission capacity.

As part of the agreement, Hitachi Energy will assess the precise service needs of the converter stations and develop a preventive maintenance program and supervise its implementation over the next five years. The agreement includes training, knowledge sharing and expertise enhancement of SNEL service personnel.

“We are delighted to be continuing our long collaboration with SNEL to protect the nation's investment in its most important power transmission link,” said Andreas Berthou, HVDC and HVDC Service Global Product Group Man-

ager of Hitachi Energy. “This long-term service agreement demonstrates how we work closely with the customer to secure availability and reliability over the entire lifetime of the asset.”

“Hitachi Energy has been a close and valued partner of SNEL for almost 50 years, when we first collaborated on the design of what was then a ground breaking HVDC link with the world's longest transmission line,” said Jean-Bosco Kayombo Kayan, CEO of SNEL. “Since then, we have worked closely together to increase the capacity and maximize the reliability of this critical national infrastructure.”

All embracing power transmission solutions

“BMG is a complete process solutions provider to all sectors of industry, which means companies can access all essential quality branded products and essential support services from one reliable supplier. This integrated approach guarantees lower production costs and higher efficiencies,” explains Carlo Beukes, Group Sales Development Manager, BMG.

“Maintenance of machinery can be a very expensive exercise, not only in terms of the cost of spare parts and labour, but also lost production due to machinery breakdowns or plant stoppages for unscheduled maintenance. Careful consideration therefore needs to be given to disciplined inspections and planned maintenance of all items of plant and production machinery. Over-maintenance can be almost as costly in terms of lost production as under maintenance, so a careful balance is critical.

“Servicing of all sections of machinery in the factory should be carefully planned on the basis of the estimated time for each procedure or service, in order to create a controlled work load for the maintenance staff. Even small faults in design, operation and maintenance, can have a negative impact on productivity and safety.

“BMG’s proactive maintenance service - which encompasses predictive maintenance services, including condition monitoring and oil analysis - is enhanced by advanced technical and design support across all functional disciplines. BMG’s maintenance and support services also include mobile breakdown, repair and maintenance support, that ensure production plants are up and running as quickly as possible following a breakdown.”

Downtime, as a result of breakdown or routine maintenance, is a critical factor affecting efficiency and

production. The stock availability of a wide range of standardised components, which are machined to accept taper-lock sleeves with bore sizes to suit a range of standard size shafts, facilitate easy fitting of these components to the shafts of machinery, like motors and gearboxes. Installation time is reduced by eliminating the necessity for on-site machining.

Standardised components, like vee belts, sprockets, couplings, slat top chain and belt systems, taper bushes, belt and chain tensioners and geared motors accommodate broad power input and torque capacity requirements, as well as a wide speed range.

The accurate installation of correct power transmission equipment ensures a long-term saving in equipment replacement costs, as well as reduced plant downtime and maintenance requirements. When alignment has been meticulously comple-

ted, it is critical that all components are securely located and doweled. This will ensure reduced wear, resulting in lower power losses, improved efficiency and eliminated vibration. The net effect is an extended operating life for all drive components.

In belt and chain drives, the correct tensioning and accurate alignment of pulleys or sprockets, also extends operating life of components and as a result of reduced friction, power consumption is lowered. Chain drives also require correct lubrication to ensure trouble-free operation. Grit and abrasive materials adversely affect the life of open chain drives.

BMG Power Transmission specialists recommend the use of lubrication-free chain as part of a plant’s efficiency programme. Tsubaki’s lube-free roller chain is ideal for use in industries where clean environments are required and where product contamination

cannot be tolerated. For example, in food processing, pharmaceutical and electronics manufacturing. Lambda chain is also suitable for environments where abrasive contamination is prominent, as is the case in wood processing and the paper and packaging industry.

“Tsubaki’s environmentally-friendly Lambda chain series has been designed with a sintered oil impregnated bush, where the chain is internally lubricated to avoid premature wear.”

“This feature extends operating life of the chain, without the need for additional maintenance or messy external lubrication,” says Marthinus Janse van Rensburg, National Product Manager – Tsubaki, BMG. “The Lambda 6th generation series is supplied with a specially developed food grade lubricant as standard and this increases chain wear life by 30%, while maintaining the same chain strength.



BMG’s Timken Quick-Flex couplings, which require minimal maintenance, are able to withstand extreme applications, including hydraulics, pumps, gearboxes, compressors, vibrator screens and fans.

Because there is no need for external lubrication, the chain is kept cleaner, making it easier to specify and install, especially in areas with strict hygiene regulations.”

According to BMG specialists, Timken Quick-Flex couplings require minimal maintenance and are able to withstand extreme applications, including hydraulics, pumps, gearboxes, compressors, vibrator screens and fans.

Timken Quick-Flex couplings are designed to transmit torque from a driving shaft to a driven shaft and to accommodate shaft misalignment within the drive. These maintenance-free couplings also dampen vibration and torque fluctuations and smooth torsional shock loads.

For further information Carlo Beukes, Group Sales Development Manager, Email: carlob@bmgworld.net



Condition Monitoring is at the heart of machine reliability

WearCheck specialises in a range of sophisticated condition monitoring techniques which help to boost the availability and reliability of machinery, thereby helping our customers to operate more efficiently and save money on maintenance costs.

Machines speak, we listen, you save!

- + 27 31 700 5460
- support@wearcheck.co.za
- wearcheckafrica
- WearCheck
- www.wearcheck.co.za





DO YOUR STAFF REQUIRE CPD TRAINING?

We come to you!

You book the date and the course, and we bring the lecturer and course material to your offices.

BOOK NOW FOR 2023 AND PAY 2022 FEES!

Since its inception in 2009, The SAIEE CPD Training Academy has focussed on offering CPD-validated courses for ECSA Registered Electrical Engineering Professionals. These courses assist engineers in maintaining their professional registration, gaining knowledge, and maintaining competence in the industry.



ONLINE AND FACE-TO-FACE TRAINING COURSES | GROUP BOOKING DISCOUNTS

T | 011 487 3003 | cpd@saiee.org.za | www.saiee.org.za | view our course brochure [here](#)

SAIEE Training Academy CPD calendar:

November and December 2022

November

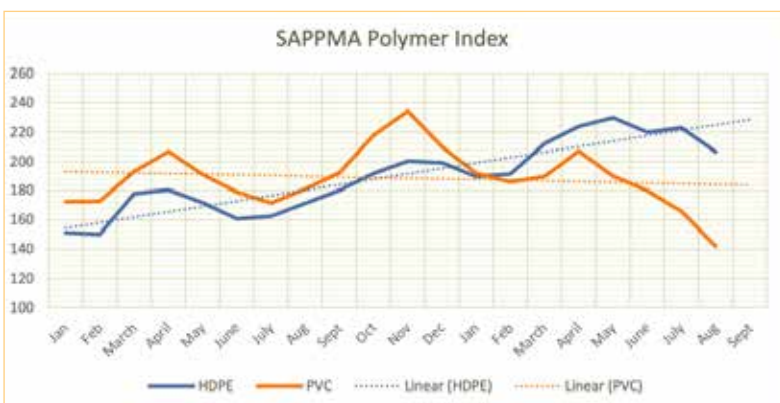
- 01/11/2022 Project Management for Engineers
- 01/11/2022 Planning Strategic Feasibility Studies
- 01/11/2022 Substation Design and Equipment Selection
- 02/11/2022 Fundamentals of Financial Evaluation for Projects
- 03/11/2022 Partial Discharge Detection and Measurement
- 08/11/2022 Incident Investigation and Management (Root Cause Analysis)
- 08/11/2022 Operating Regulations For HV/MV Systems – ORHVS
- 09/11/2022 Finance Essentials for Engineers
- 16/11/2022 Writing Good Technical Specifications
- 17/11/2022 ARC Flash
- 17/11/2022 Legal Liability: Occupational Health and Safety Act (OHS Act)
- 22/11/2022 Construction Regulations from a Legal Perspective
- 28/11/2022 Technical Report Writing
- 29/11/2022 Introduction to 5G Communication Networks
- 30/11/2022 Road to Registration
- 30/11/2022 An introduction to Artificial intelligence for Professionals

December

- 6/12/2022 SANS 10142 Ed 3
- 6/12/2022 Anatomy of Wind Turbine
- 13/12/2022 Cable Jointing and Equipment Selection
- 13/12/2022 Design Thinking and Innovation for Engineering Professional
- 13/12/2022 Hack Lab

For great discounts on group bookings, further information, or if you want to provide a CPD training course, please contact Joy Chipa, SAIEE Training Academy, Tel: 011 487-9040, Email: cpd@saiee.org.za

SAPPMA hosts 2022 AGM



IN his written report which was circulated to members prior to the virtual meeting, SAPPMA Chief Executive Officer Jan Venter stated that the financial year ending 30 June 2022 was a relatively stable and normal time of business activities compared to the previous reporting period of 2020/2021. However, polymer prices continued to escalate during this period to levels that were previously unheard of. HDPE prices escalated from 162 to 220 and PVC from 172 to 180.

“Linked to these extraordinary cost increases, was the short supply of PVC polymer in particular. Despite the fact that these factors inevitably adversely affected our members’ productions and volumes and margins, we saw the resilience of the market absorbing most of the negativity,” Jan recounted. Another source of concern raised by Venter was the excessively low selling price of plastic pipes on the South African market. He emphasized that certified pipe’s average selling prices do not reflect

its long-term value. “It is certainly justified to make reasonable gross margins on products that must last up to a hundred years and are essential to the overall well-being of all citizens. We can only hope that manufacturers and traders will start to be more conservative with their discount structures. Continuing with these low prices will have a negative impact on profitability and, eventually, product quality of pipes, as manufacturers begin to cut corners for financial survival,” Venter warned.

Institution looking to innovate after pressure from economy, COVID

The Editor speaks to the CEO of the SA Institute of Electrical Engineers (SAIEE), Leanetse Matutoane.

THE twin blows of a depressed economy intertwined with the COVID 19 pandemic and compounded by loadshedding have created challenges right across our economic landscape, disrupting traditional ways of doing business.

While the pandemic has subsided, its effects remain and new ways of addressing the disruptions caused are being sought, particularly by institutions.

CEO of the SA Institute of Electrical Engineers (SAIEE), Leanetse Matutoane admits times have been tough for many professional institutions and associations including the electrical sector, citing load shedding as an additional hurdle that has disrupted ‘business as usual’.

“Professional institutions rely for their existence on the one hand from fees from members and the commitment of dedicated individuals to volunteer their time towards maintaining standards and the integrity of the profession, and at SAIEE we are no different.

“Declining economic conditions have put pressure on the ability of many professionals to continue to pay fees coupled with companies who used to cover these expenses, but no longer do. This has been the case where the bulk of our members employed by Eskom, had this perk removed by the utility. These conditions have seen a haemorrhaging of members of late.

“The Institute represents and is the voice of electrical and electronic engineers, technologists and technicians throughout Southern Africa and is mandated by the ECSA (Engineering Council of South Africa) to certify and uphold professional standards in the region.

The cornerstone of the SAIEE is to provide training and ongoing education in all aspects of electrical engineering and this is what we strive to provide through our comprehensive continuing professional development (CPD)-related training programmes.

“Although our member numbers have declined to around 5 000 we are taking proactive steps to

boost membership the image and status of the SAIEE through innovative measures and to provide value in belonging.

“While training and technical talks are still conducted throughout our nine branches by subject matter experts, these activities can now be pursued on line and we are in the process of embracing e-learning where members can access course information and study at their own pace when it’s convenient to them. We have also started to archive our specialist lectures via the YouTube channel (SAIEETV), again allowing members the flexibility to ‘attend’ when it suits them.

Opportunities

“While the ill wind of loadshedding has caused such disruption to our economy, it has presented new opportunities to electrical and electronics professionals, caused by the move by many to move ‘off-grid’, to counter often damaging power disruptions in both homes and businesses.

The trend to install standby and off grid power sources requires professional design and oversight to ensure safe and efficient operations and like most new developments, it attracts its fair share of opportunists and charlatans’, particularly in the residential sector where homeowners are ignorant of the technology, practice and standards required to safeguard lives and property, often swayed by the lowest price.

“For SAIEE this trend has also created an opportunity to enlarge our membership footprint to not only appeal to professional electrical engineers but other electrical engineering practitioners who operate in parallel disciplines and SAIEE welcomes new members from ancillary and allied professions. To this end we are compiling a database of accredited installers and service providers which will be accessible to anyone who embarks on an alternative energy project.”

Zanele Sibiya, SAIEE Training Academy Manager, commented that across the



Leanetse Matutoane.



Zanele Sibiya.

training industry, the effect of the pandemic was the dominant reason for declines in membership with people losing their jobs, companies forced to enforce salary cuts, coupled with a huge decline in funding for training.

“In order to maintain some sort of training momentum, some companies are tapping into online digital libraries for their employees, where they can access information. However, very few of these courses are validated. The SAIEE is an important partner to that end.

“Also, the bulk of our courses are very technical in nature which for the engineering professional taking the managerial route is only part of the skill set required. SAIEE Training Acad-

emy is investigating offering more complimentary soft-skills training” she said.

Reaching out

“Professional institutions have rightly, in my opinion, been accused of having a silo mentality and a major initiative within SAIEE is to break down barriers and engage with other professionals, exchanging ideas and improving the delivery of professional services for the common good. Its only by interfacing and recognising other disciplines can institutions grow and become more efficient and, overall, meet the needs and aspirations of members in providing a valued service where it pays to belong” concluded Matutoane.

We value your input

Only through your input can we continue to improve.

- Comments
- Suggestions
- What would you like to hear about

editor@cbn.co.za

Outcome of SABIA's Visions 2030

AS one of the final projects under the current UNIDO (United Nations Industrial Development Organisation) initiatives and objectives to accelerate the biogas sector, UNIDO has sponsored and worked with SABIA to update its business strategy looking forward to 2030. This business strategy was presented by current SABIA secretary, Alberto Borello, at the Vision 2030 conference hosted by SABIA on 12 October 2022 - Building a Sustainable Southern African Biogas Market

Part of this strategy will involve the evolution of its operating model by appointing a permanent association CEO and support staff.

This process will happen over the coming months once the finalised business strategy is ratified by the members at the AGM coming up in November 2022.

Another exciting outcome of the business strategy is the implementation of six working groups, identified



Aerial view of SA's one of the first commercial biogas plants, Bio2Watt. Credit: EEP Africa.

as priority based on feedback from the biogas sector stakeholders. This will also be a means of increasing member and sector stakeholder involvement and engagement.

Another meaningful change is the restructuring of membership tiers and implementation of additional membership types, most notably the "Strategic Partner" membership category. SABIA are currently in discussions with various corporations who

will play a catalytic role in the growth of the biogas sector over the coming years, and we hope to announce our strategic partner at our AGM. This will bring needed capital for the employment of full-time staff as well as increasing expertise and knowledge onto the SABIA board.

Presentations

Particularly welcomed and informative were presentations on financing options from

Green Cape, Standard Bank and from the DBSA which provided valuable insight as to how these organisations assess criteria and business models to finance capital projects.

The technical detail included in each of the presentations indicated the banks willingness to invest in biogas projects that could prove financial viability and sustainability, a welcomed shift from earlier positions.

Foot dragging delays titanium dioxide duty rebate

THE South African coatings industry is desperately waiting for a government rebate on the import duties for titanium dioxide which is costing its members millions of rands to import despite the fact that there is no local source of this vital raw material for the production of paints, varnishes and driers.

Tara Benn, executive director of the SA Paint Manufacturing Association (SAPMA), says there has been no local production of titanium dioxide since 2016 and therefore no SA industry to protect by the imposition of import duties. "Yet, despite pleas to the government, no rebate on the heavy import duties has yet been implemented. Most of the titanium dioxide has had to be sourced from China.

"Now, six years later, the International Trade Commission Administration (ITAC) - only on June 22 this year - published an amendment gazette stating that an import duty rebate was planned for a period of two years. The rebate would only apply for two years as, according



to ITAC, local production of titanium dioxide would then have started at a new multi-billion rand Nyanza Light Metals plant being constructed at Richards Bay. But we still have no idea when the rebates will be introduced - nor an official date for the start of local production to fully meet our industry's needs," Benn stated.

She said SAPMA members' profitability had been severely affected by the heavy import duties, coupled with Covid-19 challenges. "It has undoubtedly also hit all consumers of coatings which are suffering because of supply delays and unavoidable pricing strategies required to cope with the cost of importing titanium

dioxide," she added.

Tonderai Chibasa, Tariff and Trade Remedies Manager at global trade advisors, Xaqa, which is trying to expedite the implementation of the rebates on behalf of SAPMA, said: "We have engaged with ITAC on a number of occasions and the only response we get is that the investigation is at an advanced stage. We suspect the delay is being caused by the Ministry of Trade, Industry and Competition which has to make the final decision following ITAC's recommendation. It is worth noting that the delays are not unique to the titanium dioxide investigation. We are seeing delays across all ITAC open investigations regarding customs duties," Chibasa said.

He added that, in addition to being widely used in the coatings industry, titanium dioxide is also an important raw material for many other industries such as manufacturers of adhesives, paper, plastics and rubber, printing inks, coated fabrics and textiles, ceramics, floor coverings, roofing materials, cosmetics, toothpaste, soap, water treatment agents, pharmaceuticals, food colorants, automotive products, sunscreen and catalysts, to name just a few.

The Deputy Minister of Trade, Industry and Competition (DTIC), Nomalungelo Gina, recently said the government was happy with the progress made at the new titanium dioxide pigment plant based in the Richards Bay Industrial Development Zone (RBIDZ). Gina had visited Nyanza Lights Metals to evaluate the phase one completion of the infrastructure being built by the company for its chemicals plant.

For more information, visit: www.sapma.org.za

Building materials mines are stronger by association

Custodianship of mines that produce sand and aggregates, key components of concrete, is critical to the further development of South Africa's construction industry and secure sufficient supplies for years to come.



FORTUNATELY, smaller-scale surface mines lacking some of the resources needed to ensure day-to-day compliance with legislation and other statutory conditions are turning towards industry association, ASPASA, to fill the voids.

While ASPASA'S is strongly focused on the mining industry, its association with other professional bodies, such as The Concrete Institute (TCI) and others in a given industry can add as much value and is the reason why ASPASA is a long-time associate member of the institute.

The association's work in collaboration with all levels of Government, private construction sector and labour over the past 30 years has earned the respect of the industry as well as recognition from all quarters including its overseas peers. It has also led to a stampede of surface mines applying for membership and resulted in a change of its constitution to admit mines other than the sand and aggregate quarries it was founded to represent.

Currently ASPASA's membership includes mines in the salt, dimension stone, diamond, clay and other sectors. The association also provides services aligned with affiliated onsite plants such as readymix and processing plants. When necessary the association protects and lobbies on behalf of the surface mining industry and provides appropriate training and literature to its members through its various committees.

Some of the key services that contribute to the ever-growing popularity of the asso-

"The association's work in collaboration with all levels of Government, private construction sector and labour over the past 30 years has earned the respect of the industry..."

ciation and that assist its members to provide the highest levels of service to the concrete industry include:

Audits

Membership of ASPASA requires mines to undergo two compulsory audits in health and safety, as well as environment to ensure compliance with legislation and statutory requirements.

These measure the mine's compliance and provides professional feedback to improve its performance where required. ASPASA also provides additional audits to measure compliance with standards and legal requirements relating to blasting and quality management among others.

Workshops

Provide an important interface between the association and its members in order to update and upskill the industry to respond to changing market requirements. The workshops also serve to provide explanations of best practices that improve members' business practices and profitability.

Legal updates and interpretations are also provided in the form of workshops and are an important tool to ensure compliance. Legal liability training is also provided.

Technical committees

Chaired and attended by specialists in various fields, the committees investigate, debate and interact with stakeholders and the industry to gain knowledge and disseminate information about topics as diverse as explosives risk assessment, trackless mobile machinery legislation, road construction and others.

GAIN membership

In terms of global competitiveness ASPASA is a long-established member of the Global Aggregates Information Network (GAIN), which represents sharing surface mining industry associations across the globe from China to the USA, Australia and the United Kingdom. It provides a valuable platform for the sharing of information, emerging trends and best practices.

Association benefits

These services combine to make membership of ASPASA a necessity to ensure mining operations are compliant with all relevant legislation, operate on a level playing field, while also being able to access and implement best practices from around the world as they become available.

ASPASA, Tel: (011) 791 3327, Email: office@aspasa.co.za, Web: www.aspasa.co.za

A breath of fresh air—necessity, not luxury

PICTURE yourself in a building with minimal windows, vents, doors, and other openings. There is no movement at all in the stale and dense air. Feeling uncomfortable yet? While some may say you could endure this environment at home, work or in public spaces, this is not simply a bit of discomfort.

It is a serious health issue for the occupants in any building.

The heating, ventilating, heating and air-conditioning (HVAC) system of a building ensures the supply and removal of air naturally (windows) and/or mechanically to and from a space. HVAC systems are crucial to the health of building

occupants in residential, commercial and industrial buildings. These systems provide a comfortable temperature, humidity level and optimal air quality that is free from air pollutants such as carbon monoxide, lead, nitrogen oxides, ground-level ozone, particle pollution and sulphur

oxides can severely affect an occupant's health and in serious incidents may result in death.

The Occupational Health and Safety (OHS) Act is one area of regulation which encourages South African employers to have HVAC systems installed on their premises which adequately protect employees and customers. For instance, an employer may not require or permit an employee to work in an environment where he or she is exposed to a minimum temperature of 6°C for longer than four hours, unless the employer takes rea-

sonable measures to protect the employee against the cold. In the same vein, a person may not work in excessively high temperatures without proper air movement of fresh filtered air.

How can you make sure you are looking after the health of yourself and others when it comes to HVAC in your spaces? The South African Refrigeration & Air Conditioning Association's (SARACCA) members can provide you with HVAC expertise. SARACCA upholds The National Building Regulations which specify minimum fresh air standards for vari-

ous spaces, dependent on activity and occupation levels. It is also tasked with registering refrigeration and air conditioning practitioners on the SAQCC Gas register. For ultimate peace of mind of your and others wellbeing, ensure that your HVAC systems are being worked on by authorised persons. Simply go online and search the practitioners' details on www.saqccgas.co.za or to see their membership card.

If you are an HVAC practitioner, join our family today! Benefit from regular communication, invaluable industry support and

be kept in the loop with the latest industry standards and regulations. Keep providing high-quality and compliant services to your client by utilising SARACCA's authorised training providers. SARACCA provides a subsidy to members for the training of site staff in duct erection, refrigeration, air conditioning, project management via short courses that follow SAQA approved unit standards. SARACCA strives to keep SA healthy and safe by constantly making positive contributions to the HVAC industry's reputation and standards.



About SARACCA

SARACCA is an association of contractors who have individually and jointly agreed to a set of governing standards whilst operating in free competition against each other.

The common aim is to continually strive to improve the image and standards of the industry and the association provides a forum for this purpose. In July 2009 the Department of Labour published the "Pressure Equipment Regulations" as part of the Occupational Health and Safety Act Number 85 of 1993. The South African Qualification and Certification Committee for Gas (SAQCC Gas) have been accredited by the Department of Labour to register "Authorised Persons". SARACCA, as a member of that committee, is tasked with registering refrigeration and air conditioning practitioners.

New and Improved Digital CoC

Benefit right now from digital CoCs in the palm of your hand!

All paper CoC's will be phased out and only registered HVAC+R industry contractors and practitioners will be able to issue CoCs via the official SAQCC Gas CoC App.

Registration with SAQCC Gas is crucial for all refrigeration and air conditioning contractors to provide clients with valid CoCs especially in the event of an incident for insurance claims requiring it.

Available on Huawei, Google Play store and Apple App stores.

For any enquiries, please contact us on 011 622 3890



www.saracca.co.za

saracca@icon.co.za

2nd Floor Donmed House, Cambridge Place. Cnr Kirkby & Oxford Roads, Bedfordview





Crane operators able to lift their game with assistance from Ctrack

CTRACK takes pride in being able to monitor and manage movable assets of any shape or size, from small packages to large equipment across all sectors. One industry that has been realising the huge benefits of

Ctrack's wide range of hardware and software solutions is that of mobile cranes.

"Our eco system of hardware and software has allowed us to handpick the devices and software from our vast offering and

develop solutions that address many of the unique challenges that this industry faces," says Hein Jordt, Chief Executive Officer of Ctrack Africa.

At the heart of the system is Ctrack's data generator which fea-

tures a three axis, 8g accelerometer and can accept a variety of data inputs from sensors including but not limited to the ignition, driver/operator ID, engine speed, GPS speed, RF sensors, Bluetooth or even unique parameters created by the SMILE script.

Ctrack SMILE allows for the setting up of geo-zones with pre-defined zone standing time where a warning buzzer will alert the operator before the time limit is reached. The benefit of this functionality includes customisable time settings for various standing zone types and real time notification of excessive standing time.

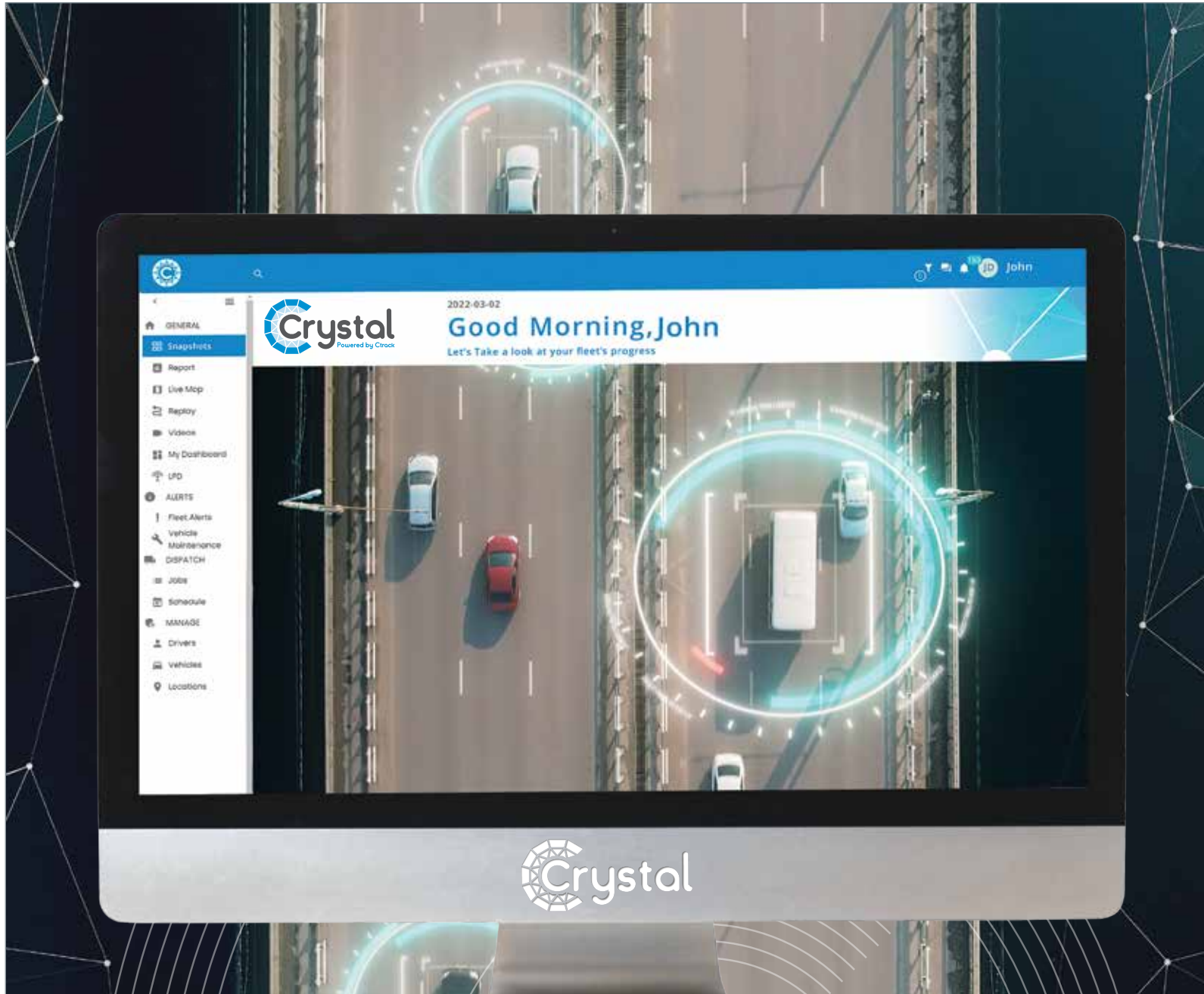
This system can be expanded even further with the addition of hardware devices that add remote immobilisation, breathalysers, 2-8 channel camera solutions and driver/operator identification functionality.

Ctrack also has the ability to unobtrusively gather data from the vehicles own CAN bus system, allowing access to unique data fields including hours used, hours used in crane mode, wind speed, maximum and actual load, working radius and the length of the boom.

All these data inputs work together to paint an accurate picture of how the crane is really being used and ensures that this machinery remains compliant and operates within prescribed safety parameters at all times.

Ctrack's software solutions have the ability to overlay this data in an endless variety of ways. For example, actual load against the max load that the crane can handle based on the current wind speed, or speed and engine speed for an accurate reflection of how hard the engine is being pushed when performing a particular action. Fleet managers can even view an accurate report on lifting information, with detailed outputs on average load, max load and load utilisation.

One of the companies that have realised these benefits, since incorporating a comprehensive Ctrack fleet management system, is Johnson Crane Hire, a mobile crane hire company that has been in operation since 1976.



Ctrack Crystal

Clear and precise fleet data in the palm of your hand.



Crystal's Innovative Solutions supports managers with

- Intelligence on Safety and Risk Mitigation
- Advanced Driver Assistance
- Vehicle Safety Inspection
- Daily Jobs & On-Route Tasks
- Camera AI Data Intelligence
- Efficient Planning with tailored Data Summaries
- Inventory & EPOD* Integration
- Asset Efficiency and Replacement Planning
- Identify Fleet Risk with Heatmaps*
- Voice Commands via Mobile Device*

* Some product functions not immediately available in Africa. Image for illustration purposes only.



www.ctrack.co.za | sales@ctrack.com | Call Centre: +27 (0)860 333 444

Always Visible

Continued on P23

Crane operators able to lift their game with assistance from Ctrack

Continued from P22

They operate a wide variety of cranes with lifting capacity ranging from 8 to 750 tons.

The cranes used by companies such as Johnson Crane Hire are colossal, complex machinery, with millions of rands worth of machinery attached to each. While there is a common misnomer that cranes are restricted to one site, the fact is, these gigantic machines travel between sites and even between provinces on a regular basis. Moving such large equipment on public roads comes with a multitude of risks, which needs to be carefully mitigated and managed. The Ctrack Bureau team along with the SHEQ (Safety, Health, Environmental and Quality) executive from Johnson Crane Hire work closely together to ensure all safety aspects are taken into account and executed to the highest of standards.

With some cranes needing to be ser-

vised every 500 hours, Ctrack's devices can be pre-defined to send alerts at certain milestones, as in the example of Johnson Crane Hire. The platform will warn fleet managers when the crane reaches the 400-hour mark, allowing for an adequate window to plan for servicing. This then allows field service mechanics as well as in house workshop teams time to ensure sufficient parts and manpower availability, minimising downtime and ensuring that their fleet remains continuously operational within the safety guidelines, mitigating numerous risk factors.

"The value and risk associated with the use of this equipment necessitates precise monitoring and strict control and Johnson Crane Hire have found that Ctrack's Fleet Management Solutions alongside their customized Bureau offering is the best solution for this need," says Gavin Gaizley, Execu-

tive Maintenance and Technical, for Johnson Crane Hire.

Ctrack's Bureau service ensures that dedicated, specialised fleet managers have eyes on their assets 24/7, ensuring that they are safely transported and operated within the specific requirements of the customer. Any transgressions of pre-determined parameters can immediately be dealt with, minimising risk and increasing efficiency.

This strict control means that special permission is required to operate the equipment between certain time frames. With these added risks during those hours, permissions can be granted by the Bureau service when deemed necessary.

"Ctrack's fleet management system ensures optimum use of every asset in a safe and compliant manner, managed by fleet management experts in our bureau service," concludes Jordt.

Smart Truck Project reaches half way stage

CCBSA - Coca-Cola Beverages South Africa - is in the middle of a five-year pilot Smart Truck Project that was initiated in 2019, to run a 44-pallet Performance-Based Standard (PBS) trailer between Bloemfontein and Upington. The PBS trailer is 27.9 metres long and can transport 44 pallets, compared to the conventional 30-pallet trailer.

The Smart Truck Project aims to redesign PBS trailers to minimise damage, improve safety and to reduce congestion on the roads. This approach uses performance-based standards, which specify the performance required of a heavy vehicle on particular routes, bearing in mind both safety and the nature of the road infrastructure itself.

CCBSA and the Department of Transport, through the Arrive Alive campaign, has further launched a state-of-the-art simulator truck that aims to improve the competency levels of truck and bus drivers, as well as other public transport drivers.

Ndanganeni Adjei, CCBSA Logistics Manager, said: "As a busi-

ness, our primary aim is to support our route to market strategy and ensure exceptional customer service, while paying due regard to road safety. We are a major road user and to support our country's efforts to road safety, we have integrated training in all our business operations to ensure we entrench a responsible mindset amongst our drivers and operators. This informs how we conduct ourselves on the road and we continuously put safety first, at all times."

For any company to survive in the current environment, characterised by economic challenges and an increase in volatility in communities, it needs a comprehensive view of the environment it does business in. This includes relevant market targeting, driving efficiencies, paying due regard to the environment and ensuring profitability for its business and operators who enable companies to get to their customers.

"We are proud of our Owner Driver Scheme which has been running for a long time and is an integral part of our business. This pro-

gramme has enabled us to support the growth of operators who own their businesses and to support South Africa's development mandate, where we provide previously disadvantaged groups the economic opportunity to be part of the supply chain of a major industrial operation", added Adjei.

Part of CCBSA's efforts to take the company's products closer to their customers, includes the Local Distribution Partners (LDP) programme which allows the company to reach its customers in townships and rural areas. Working closely with the LDPs, CCBSA has ensured smoother delivery and enhanced customer service, and has also created much needed opportunities for entrepreneurs. "Ninety percent of LDPs are from previously disadvantaged groups. Not only do LDPs create work opportunities for themselves, they employ drivers, crew, and warehouse staff from local communities. In a country like ours, every opportunity for job creation should be nurtured", noted Adjei.

EV charging network expanded with SA's first 150kW ultra-fast chargers

AUDI South Africa has teamed up with GridCars to install 70 new EV public charging connectors at 33 locations around the country in order to expand on the existing public charging network for the benefit of not only Audi e-tron customers but all electric car drivers.

"These publically accessible charging stations will offer all EV consumers regardless of vehicle ownership, the latest, state-of-the-art charging technology available in South Africa, aiming to assist consumers with the adoption of electric mobility," Audi said.

The ultra-fast DC chargers allow for impressively quick recharging. For instance an Audi e-tron 55, which has a 95kWh battery, can charge up from 10% to 90% in around half an hour, Audi says.

Audi is planning to install four of these 150kW ultra-fast charging stations along major



highway routes such as the N1, N2, N3 and N4.

The investment also includes five 80kW (DC) fast-charging stations, which allow around 185km of range in 30 minutes. You'll find these on major highway routes, with one of them positioned in Richmond to plug a long-standing gap on the route between Cape Town and Johannesburg.

Finally, Audi will be installing twenty-four 22kW (AC) stations at

various public lifestyle and recreational venues, and these will enable around 100km of range per hour of charging.

"GridCars, established in 2009, operates and manages the most extensive network of public charging stations across the country. This exciting partnership and additional investment with Audi not only expands the network, but allows it to be upgraded with additional ultra-fast charging opportunities which

is a first for our country, for all EV drivers," said GridCars managing director Winstone Jordaan.

Audi announced internationally last year that from 2026 all of the new cars it launches will be battery powered, with the last internal combustion models likely bowing out around 2033.

Reprinted from: <https://www.iol.co.za/motoring/industry-news/www.iol.co.za/motoring>

Staring down the barrel of a fuel price hike gun

IT could be argued that the courier and delivery industry is one of the fastest growing in South Africa, thanks to boosts in demand arising out of the COVID-19 pandemic, along with the proliferation of e-commerce platforms and online shopping.

However the sector is probably one of the most impacted by the steep increases in fuel prices in recent months – and it simply cannot bear the brunt of price increases without passing those costs on to others in the chain.

That's according to Jason Lombard, COO of DPD Laser, a South African courier company with 25 branches and around a thousand drivers and vehicle owners across the country.

"Fuel is a fundamental component of a distribution business's costs, and when there are sustained fuel price increases like there have been during 2022, our underlying cost base shifts significantly," Lombard explains.

This follows a 57% increase in the price of diesel between April 2021 and now, with



more than one third of that between January and June 2022. Those are increases that impact between 30 to 40% of a courier and delivery business's operating costs – particularly when it comes to larger trucks.

Lombard points out that very few delivery businesses operate on double digit profit margins, adding that the recent fuel price increases could be enough to break and close down a business that had been moderately successful before the recent run of increases – if they don't pass those costs on to their clients.

DPD Laser has navigated a way around the soaring fuel prices by offering contractual rates to regular cli-

ents, with an overlying fuel surcharge that's updated when the petrol price increases.

"Levying a surcharge in this way means that if and when the fuel price comes down, our customers will benefit from the lowered costs too – and they will hopefully pass that benefit on to their own clients as well," he says.

The South African delivery market is considerably different from its counterparts in Europe, where one delivery driver and their vehicle could easily make 30 – 40 deliveries within one city block, all within a couple of hours – and then do so using an electric vehicle that's not held hostage by soaring fuel prices.

In South Africa, nearly half of business to consumer deliveries are to rural addresses, with drivers having to drive far distances over longer periods of time to make just one delivery. This geographic spread further exacerbates the cost impacts of continuous fuel prices.

While electric vehicles are on the horizon, they're still too expensive to buy for business use because of misplaced luxury goods import taxes, along with range anxiety created by a dearth of charging stations. What's more, electricity is scarce, unreliable, and costly in South Africa, and running a fleet of electric vehicles sustainably is still a long way off.

Innovative tech and packaging reduce food loss and waste

By Lebo Mothobi-Tilo,
Marketing Director,
Tetra Pak South Africa

IN 2019 alone, one third of all food produced globally was lost or wasted. That's 1.3 billion tons of food worth R18 trillion according to estimates from the FAO (Food and Agriculture Organization). If food loss and waste (FLW) were a country, it would be the world's third largest greenhouse gas emitter.

Packaging is key to reducing waste because according to the FAO, 73% of FLW occurs at the stages of distribution, retail and consumption by consumers. Each of those major contributors to FLW can be significantly reduced by packaging that preserves the contents longer.

Of that percentage of food waste, 27% occurs during distribution and retail while 46% happens during the consumption phase, predominantly uneaten in households and going into the bin or compost.

This food 'waste' differs from food 'loss'. The latter is brought about by inefficient growing, processing or preservation — in other words, food from the front end of the supply chain that fails to ever make its way to retail.

This is the lesser component of FLW accounting for 27%. Consequently, processing solutions and technologies during manufacturing can make an important contribution to the reduction of



FLW.

Such technology is Tetra Pak's core involvement in packaging solutions for food manufacturing. It serves to keep food safe and available and can significantly contribute to reducing FLW in the food chain. Though food and beverage manufacturers have limited control over what logistics operators, retailers or consumers do downstream, they can select optimal packaging for their products, including packaging solutions which extend shelf life and increase chances of food being consumed.

On top of early technologies, modern automation systems considerably reduce food waste in larger production systems. For instance, Tetra Pak® PlantMaster enables food and beverage manufacturers to track all product movements within their facilities. This data allows them to build a baseline to understand where and why food loss occurs, and where appropriate actions and investments can be made for improvements.

Waste can also be reduced through transforming food waste into value-added ingredients. One innovation Tetra Pak is working on is a system to convert large volumes of acid whey produced from fresh cheese into value-added ingredients such as fibre. The same principle applies

to waste from brewing. We have developed a circular processing solution that enables brewers' spent grain (BSG), a side stream of the brewing process which previously ended up in landfill or as animal feed, to be used as an ingredient for other food applications like breads.

Another innovation we're pioneering is our Dairy Hub Model. This helps build sustainable value chains by training smallholder farmers and creating a link to our customers so the latter can source higher-quality milk. We have helped 54,000 smallholder farmers in 16 dairy hubs to expand their yield per cow by providing technical support and on-farm training. These hubs formalise the value chain for milk thereby reducing food losses throughout the dairy supply chain and ensuring safe milk reaches consumers. There are other dairy hubs in Kenya, Nicaragua, Pakistan, Rwanda, Senegal, Sri Lanka and Uganda.

The above are a selection of our innovative packaging and processing technology solutions, illustrating how innovation and technology can protect produce during its journey from the farmer to the consumer.

For more information:
<https://www.tetrapak.com/en-za>

HEINEKEN's Sedibeng brewery goes solar



HEINEKEN South Africa has taken a bold step in moving closer to reducing carbon emissions in all its operations, by launching a solar power plant at its Sedibeng, Midvaal brewery.

The solar plant began producing power in May this year and is the largest free-standing solar plant powering a brewery in South Africa, and the largest within the HEINEKEN group. The solar plant boasts 14 000 panels with an energy capacity of over 6.5MW providing 30% of the brewery's electricity demand. The 19ha project will generate 17MWh per annum.

"This project supports HEINEKEN'S Brewing a Better World goal reach to net zero status in all its production sites by 2030. It is the latest move made by the company, on its

journey towards more sustainable brewing. The newly installed solar plant follows a water reclamation plant unveiled at the same facility earlier this year," says Richard Kriel, HEINEKEN'S Engineering, Strategic Projects & Sustainability Manager. He joined local dignitaries and project team members this week for a media launch event.

Kriel says that there are several key distinguishing features attached to this development.

"This will be the largest solar power plant in the Sedibeng municipality. Unlike many solar plants in South Africa constructed in parking lots or on roofs, or in a desert area, the Sedibeng brewery solar plant is built in a lush field covered with wild grasses."

The plant, which has

"This will be the largest solar power plant in the Sedibeng municipality."

an estimated lifespan of 25 years, has been undertaken in partnership with The SOLA Group, a vertically-integrated provider of renewable energy solutions in South Africa.

This embedded grid-connected solar project incorporates single axis tracking technology that enables the panels to move with the rise and setting of the sun.

"SOLA is proud to be associated with Heineken and their commitment to procuring clean, low-carbon energy. Embedded generation projects right at the source of consumption help in reducing the load on

the electricity supply network without additional grid infrastructure upgrades," says Dom Wills, CEO, Sola Group.

The construction process took approximately 7 months to reach completion. During this time a total of 127 job opportunities were generated of which 100 were filled by people from the local Sedibeng community. The various job opportunities include technicians, construction teams, general workers and community members who attend to solar panel cleaning and vegetation control to maintain optimal performance.

FLYGT
a xylem brand

FLYGT BIBO®
AUTOMATED
DEWATERING
WITH 70%
LESS WEAR

A breakthrough dewatering pump with integrated intelligence for industrial operations



Xylem.com
0861 XylemSA (9953 672)
Xylem Africa

xylem
Let's Solve Water

15th annual Intervarsity Brewing Competition



THE winners of the 15th annual Intervarsity Beer Brewing and Tasting Competition have been announced. The two-day event was hosted at the Central University of Technology (CUT) in Bloemfontein in partnership with the South African Breweries (SAB) with the Beer Association of South Africa (BASA) and HEINEKEN South Africa as sponsors of the event.

“BASA is a proud sponsor of this unique competition which exposes students to world class brewing techniques...”

This year's competition saw five member teams consisting of both male and female students from 15 participating universities competing against each other. The teams were challenged to create brews in specific categories that were evaluated according to the Beer Judge Certification Programme (BJCP) guidelines.

The winners securing first place for the following beer categories are:

- Best IPA: University of Cape Town
- Best Sour Beer: 1000 Hills Chef School
- Best African Wild Ale: University of Kwa-Zulu Natal
- Best Low Alcohol Beer: 1000 Hills Chef School

This year's competition also included a new expression category, in which teams were left to invent and experiment on their own. The winners of the expression category were the University of Cape Town for their Best Beer on Show.

Finally, the award

for the best bottle dress design (label) went to the team from Stellenbosch University.

BASA CEO, Patricia Pillay congratulated all the winners “BASA is a proud sponsor of this unique competition which exposes students to world class brewing techniques while providing them with access to stalwarts in the brewing industry for guidance and mentoring. Many of the PhD and Master's students here today will build careers in the beer industry, after gaining a new respect and appreciation for the sector and its contribution to our economy”.

“We are proud to have hosted the various universities taking part in the Brewing and Tasting Intervarsity, which aims to expose our students to brewing and beer culture. The knowledge and research that participants have undertaken in preparation for the intervarsity is essential in promoting craft brewing and beer culture in South Africa under the umbrella of responsible drinking” shares CUT Acting Vice-Chancellor and Principal, Prof Alfred Ngowi.

Anton Erasmus, Trade Brewer at SAB said “We are passionate about growing and empowering young brewers. This event represents the pinnacle of inter-colaboration between industry, academia and entrepreneurship. Its effectiveness, longevity and development are underpinned by a team of innovative, beer passionate and fun-loving people, occupying a unique niche in the World of Beer.”

The Intervarsity Brewing Competition hopes to continue growing and encouraging young people to pursue a career in the art of brewing.

PepsiCo commit to use 100% renewables

Current projects expect to produce 4.2 GWh annually by end 2023

CLIMATE change is the most pressing challenge of the twenty-first century, perhaps the greatest, truly global challenge humankind has ever faced. PepsiCo is committed to doing its part to address the impacts of climate change — by aiming to source and generate 100% of its electricity needs through renewable energy by 2030.

As part of PepsiCo Positive, a strategic end-to-end transformation with sustainability at the centre of how the company will create growth and value by operating within planetary boundaries and inspiring positive change for the planet and people — PepsiCo is taking actions such as adopting more energy-efficient manufacturing processes and shifting to renewable electricity.

“We are also advancing our sustainability agenda by further reducing carbon emissions in our own operations and supporting our business partners on their journey by shar-

ing best practices, building capabilities, and collaborating on solutions”, says Steven Wolfaardt, Sustainability Lead for PepsiCo Sub-Saharan Africa.

In South Africa, significant progress has been made. Current installed capacity at 12 production sites and two distribution centres is 9.8 MWp, with total annual electricity generation amounting to 10 590 000 kwh (from August 2021 to July 2022). Furthermore, new installations have recently come online, with several others underway.

Solar installations at the Atlantis Cereals and South African Dried Fruit Plant in Upington were completed in July 2022; the Weet-Bix Plant and Parow Central Distribution Centre installations are scheduled to be completed in November 2023; Isando Phase two and Ceres Beverages will be completed in early 2023.

Expected total annual electricity produced by Weet-Bix,



South African Dried Fruit (SAD) Upington Plant, Parow CDC and Atlantis Cereals will be around 4.2 GWh.

As part of PepsiCo's plan to reduce Scope 2 emissions, achieve 100% renewable electricity and be more sustainable in its operations, they plan to maximise onsite renewable electricity generation wherever possible. In line with their sustainable agenda the sites were selected based on:

- The space availability
- The sites contri-

tribution to our total electricity demand

- The potential to replace the demand with solar generated power
- Opportunity to relook business efficiencies

All projects are grid tied projects with solar panels and inverters feeding into the site reticulation. The principle of a grid tied installation means that solar simply offsets the sites electrical demand and the site uses less municipal electricity in the day when

the solar system is producing electricity.

PepsiCo will also be supporting the City of Cape Town's goal of shifting to 100% renewable energy by purchasing power from decentralised commercial and industrial producers.

“We're planning to source renewable electricity through signing power purchase agreements with Independent Power Producers or directly from the municipalities or other supply authorities, where possible”, concludes Wolfaardt.

SU study reviews meat alternatives for sub-Saharan Africa

IT's estimated that the majority of the expected 73% increase in the global demand for meat by 2050 will come from sub-Saharan Africa (SSA). Since human and environmental health concerns are likely to become more prominent with this increased consumption, plant-based meat alternatives have been touted as a possible alternative. But it may take some time before consumers in the region substitute their juicy steak of chicken wings for a vegan burger.

A review on plant-based meat alternatives in SSA published recently in Scientific African shows that before there can be any large-scale adoption of plant-based meat products in the region, we will first have to determine the social implications of eating less meat, the barriers to eating plant-based meat analogues, consumers' acceptance of these products, and strategies that could get people to supplement their meat intake with plant-based alternatives. Plant-based meat analogues are foods designed to

mimic the appearance, flavour, and texture of meat products. These can include, among others, burgers, sausages, nuggets, mince and meatballs.

The review was conducted by Omamuyowi Gbejehow and Dr Jeannine Marais from the Department of Food Science at Stellenbosch University and Dr Sara Erasmus from the Food Quality & Design Group at Wageningen University & Research in The Netherlands. They examined the available literature on the production and consumption of plant-based meat alternatives by searching the Web of Science and Scopus databases for academic papers and Google for news or popular articles.

The researchers say their review has shown that there are certain barriers to consumers' acceptance of plant-based meat analogues even though worldwide, plant-based meat product sales accounted for \$12.1 billion in 2019 and are likely to increase by 15% to reach \$27.9 billion by 2025 and \$149 billion by 2029. They do point out, however,

that different versions of plant-based meat products have been available in South Africa and the rest of SSA over the past 25 years.

Barriers

“Consumers' preference for meat is the most significant barrier to eating plant-based meat products or following a plant-based diet. In addition, meat has important socio-cultural connotations such as status, power, hierarchy, and subjugation of others.

When it comes to the environmental and health risks associated with the regular eating meat from domesticated animals, the researchers point out that while consumers will acknowledge these risks, they are still unlikely to eat less meat. This phenomenon is known as the “meat paradox”.

'Halo effect'

“Our review has shown that the 'halo effect' (consumers' perception that plant products are more environmentally friendly) afforded to



Image credit: Vegan Food & Living.

plant-based meat is not completely warranted because researchers are (un)knowingly discounting the processed nature of meat alternatives in any environmental or health risk assessment.”

According to them, the available literature is replete with strategies to reduce traditional meat consumption and to try plant-based meat alternatives. These include, among others, meatless days, partially substituting traditional meat with plant-based ingredients (e.g., “hybrid burgers”), cultural and lifestyle changes, food labelling, consumer education, and taxes on traditional meat or subsidies on plant-based meat.

“If consumers in SSA

are to be convinced to eat less meat and/or substitute it for plant-based alternatives, the latter should not be marketed as a replacement for traditional meat products but as a complement. Marketing strategies should be tailored to different sections of consumers because such a contextual approach is bound to provide more favourable and long-term results than a 'one-size-fit-all strategy.”

Source: Gbejehow, O; Marais, J; & Erasmus, S 2022. Planetary health and the promises of plant-based meat from a sub-Saharan African perspective: A review. Scientific African 17: DOI: org/10.1016/j.sciaf.2022.e01304



Kinetiko finds gas resource on Majuba doorstep!

KINETIKO Energy Ltd the Australian gas explorer and developer focused on advanced shallow conventional gas and coal bed methane in South Africa, provides the following update on its onshore

gas exploration and production development activities.

Core hole 271-23C spudded on 21 September 2022 in the vicinity of Majuba power station (Mpumalanga) intersected strong gassy geology in the sediments.

Kinetiko CEO, Nick de Blocq, commented: "Placing the initial core hole of our return to exploration activities so close to Majuba power station opens a new potential market

for our mid-ER271 gas. Majuba is designed to co-fire on gas.

"It was very encouraging when we first sensed gas in the fractures of the deep dolerite sill and the source became obvious as we broke through to the sediments below.

"What we are also doing here is maintaining our 100% strike rate. Every one of our thirty boreholes has cut gas, proving the productivity of the compartmentalisation of the sediments in our Rights areas.

"The imminent completion of our merger and obtaining our maiden reserves report will be major milestones in our journey and we await these with great anticipation as we keep the Company moving forward in a distinctly positive direction.

"Core hole 271-23C reached terminal depth at 478m on 21 October having drilled through a deep lobe of dolerite to 227m before breaking through to carbonaceous zones. We are aware, from aeromags surveys, that the dolerite sill undulates and we have encountered a thick sill section in this borehole. However, experience dictates that thicker sills can mean deeper sands and therefore the terminal depth of this hole proved to be deeper than the recent Korhaan wells.

"Gas shows became stronger below 270m with "zebra" formation: coals, sand and siltstone striped with carbonaceous mud matrix. Onsite gas emission and desorption analysis was performed on the core samples by our wellsite geologist. On completion of the drilling the Company logged the borehole and will analyse the results, tying in with regional stratigraphy.

Documentation
Completion

"The Company has lodged with the ASX and ASIC all documentation for approval for release of the notice of meeting for the shareholders of Kinetiko to approve the acquisition of Badimo Gas (Pty) Ltd which holds a 51% interest in the South African exploration rights, held by Afro Energy. On successful completion of the shareholders meeting scheduled for late November 2022, Kinetiko will become the 100% owner of Afro Energy" he concluded.

GAS TAKES OFF IN RESIDENTIAL NEW BUILDS



A new luxury apartment block, at 57 North Beach Road in **Umhloti** has recently been completed by GPS KZN. This ultra-luxurious six apartment exclusive development is on the beach in Umhloti. Every unit has unsurpassed views of the beach and a 180° vista of the Indian Ocean.

GPS was appointed to provide the LPGas water heating, hobs and gas braais for all the units. Gas is fed from the cylinder gas store on ground level, up two utility ducts to provide safe, reliable and efficient energy to all floors.

A key component of this development was to not be reliant on municipal electricity. This was achieved by putting all high energy consumption appliances on gas and adding a solar PV and battery system.

Another new apartment block, Summer Ridge, in **Umhlanga** has also recently been completed.

This high quality, relaxed lifestyle and pet-friendly environment has 152 apartments. GPS was appointed to provide the LPGas water heating and hobs plus gas BBQs for the penthouse units. Gas is once again from the cylinder gas store on ground level, via an electric vapouriser into a ring header and then up the various utility ducts to provide safe, reliable and efficient energy to all floors.

CONSTRUCTION SITES

On busy construction sites, GPS prides itself on good co-ordination and planning to make gas installations as easy as possible! Safety of our workers is our highest priority, and this is a key focus area that is critical to our customers too. All large construction company strive to achieve zero lost workdays due to injury and GPS is proud to be committed to this too.

A larger housing development that started pre-COVID has also been piped with underground piping to all 201 units. One of Invicta's largest gas fed developments on the eastern side of **Pretoria** is supplied with the LPG via a mini bulk system, called "dumpies".

These multi-storey units are all connected to the bulk storage yard that is situated at the main entrance gate. With pre-paid metering for gas, water and electricity each occupant can seamlessly purchase and top-up all service from the comfort of their couch.

MANY ADVANTAGES

With gas now being the most reliable energy source, all these developments can be assured of hot water and cooked meals during any length of power cuts.

With SA's local gas production and gas imports to our coastal terminals, South Africa has had a constant supply of LPGas since 2011 and new coastal storage for LNG is also on its way to further enhance the Natural Gas supply for the growing demand for low carbon energy sources.

Natural Gas is the least carbon-intensive fossil fuel with 90X less Sulphur Dioxide, 5X less Nitrogen Oxides and 50% less CO₂ than ESKOM coal produced electricity.

📞 AJ de Wet: 082 326 8682 | Brandon: 076 423 3800 🌐 WWW.GASPS.CO.ZA



Apartment ground level storage facilities of LPG.

Pratley Putty plays a key role in Kariba Dam spillway rehabilitation



PRATLEY Putty is playing a key role in the rehabilitation of the Kariba Dam spillway. The hand-mouldable, high-performance putty-like adhesive was identified by distributor Mart Solutions to be used in the cofferdam components of the project.

“Pratley Putty is ideal for use underwater, but can also fill, seal, build up and bond almost any rigid material,” notes Pratley Marketing Director Eldon Kruger.

Martie Coulson, the owner of distributor Mart Solutions, explains that a similar product was trialled initially, but proved too costly and had a long lead time to boot. “Pratley Putty proved the best quick-setting solution to hold the cofferdam components in place,” she highlights.

The concrete dam wall has six sluice gates that release water into Lake Kariba. Over time, the concrete has expanded slightly, affecting the smooth operation of the sluice gates, which could possibly cause the gates to jam in either the open or closed position, posing a potential risk to people, animals, and the environment.

The spillway gates are being refurbished one by one in a long-term project that commenced in 2019 and is scheduled for completion in 2025. A consortium comprising GE Hydro France and Freyssinet International was awarded the contract by the Zambezi River Authority (ZRA).

The first step is to manufacture key components like a new emergency gate, motorised gantry crane, and cofferdam parts off-site. These are transported to the site by ship

and road, reassembled and placed into position.

The next step is to create a dry workspace at each gate so it can be refurbished. This entails building a small temporary cofferdam that clings to the dam wall on its lakeside. Experienced divers affix steel supporting members to the upstream face of the dam wall to allow the cofferdam to be put in place.

“As part of the work we perform on-site, we must place and anchor the metal support pieces underwater. Then we must grout between these supports and the concrete structure of the cofferdam. Prior to pouring the grout, we place some wood and steel framework in place,” highlights Coulson.

The main application of Pratley Putty is to seal the framework to avoid leakages during pouring. In terms of the application process, both components of Pratley Putty are mixed on the surface and then the mixture is taken underwater by a diver who applies it by hand.

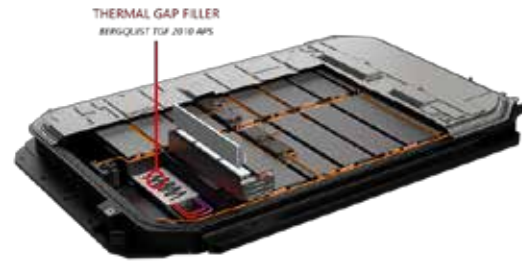
A crane on the dam wall lowers the cofferdam pieces into place one by one. The water trapped between the cofferdam and the dam wall is pumped out into the lake, creating the water-free space necessary for the refurbishment work.

Finally, a new self-motorised gantry crane will be installed that can place the emergency gate in position to close any of the sluice gates as required. The spillway itself will be commissioned once the six sluice gates have been refurbished and the new gantry crane installed.

Henkel expands EV battery sealant solution

WITH the rapid growth in EV sales, manufacturers are seeking new ways to manufacture better, safer batteries that manage thermal risks, while also increasing production efficiency and cost. As an expert partner to automotive OEMs and component manufacturers, Henkel Adhesive Technologies is delivering innovations to meet these objectives.

“The fast-growing development towards zero-emissions mobility, especially E-Mobility, is requiring steady innovation to meet demands in this field,” says Stephan Hofer, Global Market Strategy Head for E-Mobility at Henkel. “These large market potentials are fuelling Henkel’s effort to expand our portfolio of E-Mobility solutions even further, especially pushing



forward in the field of thermal interface materials.”

Henkel has launched a new product within its suite of solutions for EV batteries – Bergquist TGF 2010 APS – a new two-part silicone-free, liquid gap filler. The new thermal gap filler solution helps to extend the life of automotive batteries through its high-performance heat dissipation qualities, while also helping customers manufacture battery packs faster and optimize their

equipment maintenance costs. Thanks to its silicone-free formulation, the risks of silicon outgassing are avoided, thereby preventing negative impacts to electrical contacts or to surfaces to be painted.

Developed in close collaboration with Henkel customers and dispensing equipment suppliers, the new solution has already demonstrated its performance within production environments: With a high dispense rate of 80cc/second

and an application time of approximately 60 seconds, one OEM has confirmed that the new solution has enabled the manufacture of 800 battery packs a day on a single production line. When deployed, Bergquist TGF 2010 APS provides a thermal conductivity of 2.0W/mK, allowing ample heat dissipation. The optimized filler package with low abrasion characteristics helps reducing maintenance work and wear of dispense equipment. The new product also fulfills the need of OEMs for a fast-dispensable gap filler solution that allows a high throughput rate in production lines without requiring investment in additional equipment. The low squeeze flow of the material enables a fast assembly of the battery modules keeping cycle

times at a very high level.

“For us at Henkel it is essential that our products and solutions meet the needs of our customers as best as possible. For that we build on our know how and technologies as well as our close relationships along the entire value chain,” explains Marvin Romberg, E-Mobility Business Development Manager EIMEA at Henkel. “The Bergquist TGF 2010 APS was developed to perfectly reflect customer demands in Battery Gap Fillers and shows how Henkel supports with the right setup for mass production, utilizing our global partner network of dispensing equipment suppliers.”

For more information visit www.henkel-adhesives.com/emobility.

“CONTINUOUS INNOVATION, COMPELLING NEW STYLES”



WWW.CERAMIC.CO.ZA

Our heritage has shown that we are innovators in style and technology. Surround yourself with the most beautiful technological advancement you can find – Ceramic Industries have been quietly turning out world-class products since 1975. Our innovative production techniques reduce carbon emissions and result in the kind of high-quality products you’ll want to come home to again and again. World-leading equipment producing innovative, stylish products - locally!

CAPE BUSINESS NEWS

Cape Business News, founded in 1980, is primarily a promotional vehicle for companies that have the Cape Business community as a primary target market.

ADVERTISING

For all your advertising requirements, contact our Sales Team on 021 250 0400

CERAMIC INDUSTRIES • WORLD-CLASS PRODUCTS MADE LOCALLY



Effective filtration and system contamination protocols

CONTAMINANTS particles create headaches for hydraulic engineers. Please acknowledge that with time the hydraulic systems become less efficient and allow more contaminants to enter the system. With time and continued use such ingress will ultimately cause breakdown in the system. The chances of a catastrophic breakdown become more prevalent if the system maintenance is neglected.

"That can be very, very costly!" warns Hydrasales Elvira Caripis.

Contaminants are either generated externally or internally through a harsh environment, dirty fluids, component corrosion, or reduced systems maintenance and housekeeping. There is a very fine line between clean and dirty systems. With contamination control monitoring the ISO ratings will clearly indicate the levels of dirt within a system.

It is found that system maintenance gets relegated to a low priority status. It is often a mindset problem as buyers adopt cost savings. Maintenance per-

sonnel forget to adopt a "stitch in time saves nine" philosophy. They seldom focus on the cost implications of a system standstill due to breakdown. Contamination control is a long-term process and requires ongoing monitoring.

Textbooks report that around seventy to ninety percent of hydraulic system breakdowns are attributed to particulate contamination.

Hydrasales sales engineer Chris Banks advocates; "If a systems engineer can incorporate appropriate filtration and contamination control equipment to reduce contaminants the system can achieve efficiencies to prolong equipment working life."

He prioritizes helping design engineers with filter sizing. He says, "Filter sizing with the MP Filtri software helps with filter proper filter selection. It minimises unnecessary errors. The software enables simulation with different flows and pressures. The end report calculates the estimated pressure drops and maximizes the opportunity for cor-

rect filter selection."

Components are continuously fed contaminants before component failure. A system, thus, loses efficiency as more contaminants impede performance. It is accepted that a new, a hydraulic system runs at optimum pressures and flow rates, the system loads and speeds and delivers to spec optimally. Over-time, contaminants will cause wear and cracks at critical component surface areas.

Typically, the tolerances are small, and engineers expect component clearances of 0.5 microns up to 50 microns. It doesn't take much dirt or contaminant particle to block an orifice within

a hydraulic system. Any blockage or impairment will ultimately restrict flow within the system, impacting, stopping, or slowing down the application.

How can we control this contamination problem and extend component life?

Incorporate effective filtration:

Incorporate effective filtration at the design stage of the system. Depending on the sophistication and needs for system outputs, the designer must consider including pressure, return, suction, and an offline filtration system to protect system components.

Ensure that filtration is

fitted with the correct filter elements

Hydrasales Lucas Thela cautions, "A word of caution on the approach to the system design. The cheapest design may meet the minimum operating parameters. Without installing proper filters to meet the operating needs at peak pressures can become expensive." He continues; "There is a lack of appreciation for the importance of good filtration and contamination control! A basic understanding will certainly go a long way!" Hydrasales provide FREE support at the design stage and offer FREE training on filtration and fluid condi-

tion monitoring.

General manager Elvira Caripis emphasizes, "Technology platforms like Zoom allow connecting with the remotest customers. Internet access is a great enabler." She advised, "Maintenance and field personnel will have the technical information they desire. It is a form of upskilling and can be considered as appropriate training to help these people on-the-job."

Online particle monitors analyze systems 24/7 triggering internal and external alarms should the levels of contamination deteriorate or moisture levels change. It is a ideal early warning system.

The benefits of online particle counting are:

- Saving money on the total cost of filtration eliminating unscheduled filter changes
- Constant system monitoring = predictive maintenance = cost savings
- Constant system monitoring = tracking system cleanliness = cost savings
- Prolonging significant component life

due to predictive maintenance

- Saving time as high-cost processes are effectively monitored
- There is predictive management of contamination levels. It is a cost-effective and efficient method of system monitoring when system cleanliness levels are exceeded.

Hydrasales stocks a comprehensive range of quality and time-tested Hydraulic filters, filter elements and system accessories and represents MP Filtri, Faster Couplings, Mintor Sight Glasses and Badger Meters Hedland range of flow meters. These global manufacturers comply with international quality standards and their products are certified to international standards. Hydrasales enjoy direct technical support from these leading brands and the support is key to application development and innovation in African markets.

For more information visit: www.hydrasale.co.za



Leaders in Hydraulic Filtration & Accessories

www.hydrasale.co.za



HYDRASALES
EXCELLENCE IS OUR LEGACY



- Johannesburg: 011 392 3736
- Cape Town: 021 552 0462
- Durban: 031 579 1479



Atlas Copco giving away 65 portable air compressors!

ATLAS Copco Industrial South Africa has already delivered portable air compressors to sixty deserving small contractors and business owners around the country who rely on air to power their pneumatic tools.

"But we are not quite done," says Atlas Copco Communications Professional, Noluthando Zondo. "We still have five portable Automan air compressors, each valued at over R6000, to give away."

These high quality 1.5kW oil-lubricated piston compressors are ideal for powering tools used for a wide range of applications such as wood working, panel beating, spray painting, tyre inflation, blow moulding, and surface cleaning.

"To stand a chance to win one of these Automans, we invite small contractors and business owners to sim-



Automan portable piston compressor.

ply tell us about their business and how this compressor will help to grow their enterprise," explains Noluthando. "Entrants have the option of emailing their entries to general.enquiries@atlascopco.com or sending us a Whatsapp on 078 120 6715. Entries must reach us no later than Friday 11 November 2022. Once we have identified the five lucky

winners, we will contact them directly before the end of November." Noluthando adds that winners will receive training during the hand-over of the compressor.

"The reason behind Atlas Copco South Africa's support and developmental strategy for small businesses is simple," says Noluthando. "By assisting small contractors and

business owners to grow sustainably, we are addressing some of the country's most pressing problems. Against the backdrop of unemployment and limited economic growth, the development of small businesses creates jobs, which in turn helps to uplift communities. It also increases the number of active income earners who can make a positive contribution to South Africa's economy, stimulating the country's growth."

"As a subsidiary of Atlas Copco Group, a multinational engineering specialist, and Home of Industrial Ideas, it is our brand objective to empower others so that they can make a difference too," concludes Noluthando.

For more information, please contact: Wendy Buffa-Pace, Email: wendyb@atlascopco.com

Stroke measurement in hydraulic cylinders - say goodbye to drilling pistons!



WHETHER it's agricultural machinery, construction equipment, or municipal vehicles, intelligent sensors are indispensable throughout the mobile machine market. Accurately recording paths and angles is an integral component of intelligent operating concepts and functions. These functions improve not only the convenience, but also the safety of mobile machines. Using intelligent sensors also increases the performance and efficiency of mobile machines, allowing repetitive work processes to be automated and therefore relieving machine operators at the same time.

Measure and monitor motion sequences

Since most motion sequences for mobile machines employ hydraulic cylinders, one of the most important measurement tasks for sensor technology is precisely determining the stroke of the cylinder to enable measurement and monitoring of the motions to be carried out. No wonder, then, that both machine and sensor manufacturers are always looking for new innovations in stroke measurement for hydraulic cylinders.

Measuring system for stroke measurement in hydraulic cylinders

Instrotech is offering SIKO and unique SGH10, a measuring system for direct stroke measurement in hydraulic cylinders. This specialised, integrated and innovative measurement solution is based on customer feedback and many years experience in path measurement technology. The cylinder stroke is measured precisely using

Bowden cable sensor technology installed directly in the cylinder. The high quality plug ensures the system fulfills protection class IP69K.

A minor technical revolution

Technologically speaking, the innovative SGH10 cylinder stroke measuring system pursues an entirely different technological approach than measuring systems commonly found in the market, which is based on magneto-restrictive, inductive, or hall based technology. In contrast to these systems, a Bowden cable mechanism installed directly in the cylinder is used to measure the stroke. The cable of the Bowden cable mechanism is mounted in the piston head. If the cylinder is extended, the cable, which is wound up in a cable drum, is pulled out. The rotation of the cable drum that is thereby created is detected without contact by the sensor electronics and used to calculate the linear travel. This makes it possible to detect the position of the cylinder precisely and completely at all times. The magnets that are used to detect the rotation are scanned by the electronics through the pressure-resistant base plate of the SGH10. The electronics are fully encapsulated on the unpressurized side of the system. This means the entire measuring system is built into the cylinder and is optimally protected from external environmental conditions. This provides a clear advantage: in contrast to a measuring system mounted externally on the cylinder, the sensor system cannot be influenced or damaged by

loose parts or by environmental influences.

Piston drilling unnecessary

Another revolutionary aspect is the reduction of costs for integrating the system into the cylinder. This is because in previous measuring systems, the sensor rods had to be integrated into the piston over the entire measuring path; this often required long and highly precise bore holes in the piston. This is not only expensive, but also weakens the structure of the piston. In the SGH10 stroke measuring system, just one small thread is needed in the piston to mount the cable. This allows the system to offer major potential cost savings, which affects production times and, ultimately, overall costs for hydraulic cylinders. The greater the stroke length, the greater the potential for monetary savings. Cylinder manufacturers, mechanical engineers and end-use customers reap the benefits.

Also integrates into telescopic cylinders

Another highlight is that, in contrast to the alternative measuring systems described, the SGH measuring technology can even be used in telescopic cylinders. It provides design engineers with entirely new options when developing forward-thinking assistance systems and supplemental functions in mobile machines.

Contact INSTRO-TECH on +010 595 1831, Email: sales@instrotech.co.za or visit: www.instrotech.co.za, for more information on SIKO's SGH10 measuring system for direct stroke measurement in hydraulic cylinders.

New range of pneumatic actuators

EMVAfrica, has introduced the new V-ACT pneumatic-operated rack and pinion actuator, suitable for the automation of new and existing quarter turn valves found on butterfly and ball type valves.

"There is a growing requirement for actuated valves," says Preshan Pillay, Valves Product Manager at EMVAfrica. "And after researching the market for high quality, reliable actuators, we settled on the V-ACT range that met all our requirement for quality and reliability.



"...the unit is particularly suitable for the manufacturing sector where automation is required..."

This range extends and complements our current comprehensive valve holding and is ideal for any industry that uses valves." Pillay adds that the unit is particularly suitable for the manufacturing sector where automation is required to control different processes.

The V-ACT features a simple yet smart design that delivers several advantages.

The compact dual piston rack and pinion design ensures a symmetric mounting position, a high life cycle and fast operation. Reverse rotation can be conveniently and rapidly accomplished in the field by simply inverting the pistons. Furthermore, the mounting of solenoids, limit switches and other accessories is easy. The actuators boast an extruded aluminium (ASTM6005) body with internal as well as external corrosion protection. The honed cylinder delivers longer life and low coefficient of friction. The CE approved V-ACT is ISO5211 and Namur compliant and manufactured under ISO9001:2000

certification. The rugged reliability of these actuators reduces the chance of failure, thus maximising uptime and productivity for end users.

"To support our customers, we have employed a full-time qualified actuator technician and we carry stock of a full range of the fast-moving spares for the whole range of V-ACT actuators to ensure fast supply," notes Pillay.

"In line with our 3-S factor - Stock, Service and Solutions - we source and supply superior quality products from reputable global manufacturers, provide support and industry experience and implement a 360° approach to prob-

lem-solving." Says Pillay.

The extensive valve offering from ISO 9001 certified EMVAfrica serves diverse applications within Southern Africa's mining, mineral processing, water treatment, petrochemical, power generation, food & beverage, and general industrial sectors.

The V-ACT is currently available in a pneumatic quarter turn option and Pillay reveals that Energyvalves will soon be expanding their offering to include a linear pneumatic actuator as well as an electric version.

For more information visit: www.emv africa.co.za

We value your input

Only through your input can we continue to improve.

- Comments
- Suggestions
- What would you like to hear about

editor@cbn.co.za

Researchers determine tyre particles can impact fresh water

By University of British Columbia

EVER wondered what happens to the rubber tread that wears off a vehicle's tyres?

New modeling by UBC Okanagan researchers suggests an increasing amount of microplastics—fragments from tyres and roadways—are ending up in lakes and streams.

The UBCO School of Engineering researchers developed a conceptual framework to examine the potential contamination originating from the regular use of vehicles on roads and highways. Their findings suggest that more than 50 tons of tyre and road wear particles are released into waterways annually in an area like the Okanagan.

«The results are quite significant,» says Dr. Haroon Mian, a UBC Postdoctoral Research Associate and study lead author. «It's especially alarming considering that this microscopic waste can contaminate our freshwater sources.»

Tyres are critical for transportation and about 1.5 billion tyres are produced annually to meet global demand—leading to almost six million tons of tyre and road wear particles being generated around the world.

Both synthetic rubber and vulcanized natural rubber are considered forms of elastomeric polymers contributing to microplastics. It isn't simply the rubber that causes contamination, says Dr. Mian.

«Over time, all of those materials begin to break down and can release chemical additives that affect aquatic species,» he explains.



While some of the materials end up in the atmosphere, the majority of the tyre and road wear particles are spread across roadways and eventually end up in aquatic environments. The results of his study indicate that almost 15 tons of tyre and road wear particles can be transmitted to lake surface water each year, he adds.

This is not only a global issue, but a local one, he points out. The research was done locally and he says lakes like Okanagan and Kalamalka are being unknowingly contaminated every day as thousands of people drive the highways connecting BC interior communities.

«This analysis focused on a small section of highway in the BC interior, but the findings suggest that other regions across Canada may experience the same chal-

lenges with this type of contamination,» says Mian. «A more uniform and comprehensive management and treatment strategy must be developed to limit the possible environmental ramifications.»

As part of his research, Mian also conducted a scenario-based assessment to estimate tyre and road wear emissions by considering various real-time factors such as tyre and roadway degradation in the environment and seasonal variations.

The report recommends implementing tyre wear labels and standardization policies, adopting tyre pressure monitoring systems, and applying wetlands or roadside swales as a secondary runoff treatment.

The research appeared in Science of the Total Environment.

IN THE NEXT ISSUE:

- Agri-Processing & Harvest Supply Chain
- Automation Systems / Instrumentation & Process Control
- Boilers & Burners / Combustion Technology / Heating Control
- Breweries / Wineries / Distilleries
- Compressors / Plant & Equipment
- Materials Handling & Equipment
- Power Solutions / Energy Efficiency / Power Generation / Transmission & Distribution
- PPE / Occupational Health & Safety
- Pumps / Valves / Fluid Technology / Filtration
- Warehousing: Storage / Distribution & Logistics
- Water Engineering: Water Reuse / Water Storage / Grey Water Systems / Waste Water Treatment Solutions

Cape Business News is always on the lookout for stories of companies that are shaping the Cape business landscape. If your company has a story to share, in these, or any other business sector, send your story to editor@cbn.co.za for consideration.

CAPE Business News

Chairman:

Rudi Leitner

rudi.leitner@hypenica.com

Publisher:

Robin Dunbar

robin.dunbar@cbn.co.za

Editor:

Robin Hayes

editor@cbn.co.za

Production Manager:

Elise Jacobs

elise.jacobs@cbn.co.za

Sales & Marketing Director:

Robin Dunbar

robin.dunbar@cbn.co.za

Sales Team:

Heather Ferreira

heather.ferreira@cbn.co.za

Shaun Austin

shaun.austin@cbn.co.za

Subscriptions:

subscriptions@cbn.co.za

Cape Business News

sales@cbn.co.za

'Smart plastic' material is step forward toward soft, flexible robotics and electronics

By University of Texas at Austin

INSPIRED by living things from trees to shellfish, researchers at The University of Texas at Austin set out to create a plastic much like many life forms that are hard and rigid in some places and soft and stretchy in others. Their success—a first, using only light and a catalyst to change properties such as hardness and elasticity in molecules of the same type—has brought about a new material that is 10 times as tough as natural rubber and could lead to more flexible electronics and robotics.

The findings are published recently in the journal *Science*.

«This is the first material of its type,» said Zachariah Page, assistant professor of chemistry and corresponding author on the paper. «The ability to control crystallization, and therefore the physical properties of the material, with the application of light

is potentially transformative for wearable electronics or actuators in soft robotics.»

Scientists have long sought to mimic the properties of living structures, like skin and muscle, with synthetic materials. In living organisms, structures often combine attributes such as strength and flexibility with ease. When using a mix of different synthetic materials to mimic these attributes, materials often fail, coming apart and ripping at the junctures between different materials.

Oftentimes, when bringing materials together, particularly if they have very different mechanical properties, they want to come apart,» Page said. Page and his team were able to control and change the structure of a plastic-like material, using light to alter how firm or stretchy the material would be.

Chemists started with a monomer, a small molecule that binds with others like it to form the building blocks for larger structures called polymers that were simi-

lar to the polymer found in the most commonly used plastic. After testing a dozen catalysts, they found one that, when added to their monomer and shown visible light, resulted in a semi-crystalline polymer similar to those found in existing synthetic rubber. A harder and more rigid material was formed in the areas the light touched, while the unlit areas retained their soft, stretchy properties.

Because the substance is made of one material with different properties, it was stronger and could be stretched farther than most mixed materials.

The reaction takes place at room temperature, the monomer and catalyst are commercially available, and researchers used inexpensive blue LEDs as the light source in the experiment. The reaction also takes less than an hour and minimizes use of any hazardous waste, which makes the process rapid, inexpensive, energy efficient and environmentally benign.

The researchers will next seek to develop more objects with the material to continue to test its usability.

«We are looking forward to exploring methods of applying this chemistry towards making 3D objects containing both hard and soft components,» said first author Adrian Rylski, a doctoral student at UT Austin.

The team envisions the material could be used as a flexible foundation to anchor electronic components in medical devices or wearable tech. In robotics, strong and flexible materials are desirable to improve movement and durability.

Henry L. Cater, Keldy S. Mason, Marshall J. Allen, Anthony J. Arrowood, Benny D. Freeman and Gabriel E. Sanoja of The University of Texas at Austin also contributed to the research.



Cape Business News has taken all reasonable care to ensure that the information contained in this publication is accurate on the stated date of publication. It is possible that the information may be out of date, incomplete or the opinion of the author. It is therefore advisable that you verify any information before relying on it. Cape Business News accepts no responsibility for the consequences of error, or for any loss or damage suffered by users of any of the information and material contained in this publication. Materials published in this newspaper are subject to copyright and other proprietary rights.

50LT BREWING TANK WITH STAND

PLASTICS FOR AFRICA



3 Montague Drive, Montague Gardens
021 551 5790 | www.plasticsforafrica.co.za

CAPE Business News

Cape Business News, founded in 1980, is primarily a promotional vehicle for companies that have the Cape Business community as a primary target market.

ADVERTISING
For all your advertising requirements, contact our Sales Team
sales@cbn.co.za

GRIPPER & CO (PTY) LTD
INDUSTRIAL AUTOMATION & PNEUMATIC EQUIPMENT

TECHNICAL EQUIPMENT SUPPLIERS & AGENTS

cmatic ASCO NUMATIC piab Findeva
DUNMUR JIP ROTOSURE Dwyer

158 Lower Main Rd, Observatory, Cape Town
Tel: 021 447 7203 • Fax 021 447 6981

www.gripper.co.za

The Dude vs the Kremlin trolls

WHAT makes you so sure that Trump and Putin are colluding to divide Americans?" Bill the Beard was disturbing the peace in the local Pub & Grill by interrogating Luke the Dude.

"Trump," asserted Bill, "has been denying the 'Russia Russia Russia' hoax all along and now he is suing CNN for reporting on exactly the same lines as your argument."

"Really?" asked Big Ben, "on what misdeed would he base that?"

"Trump is suing them for libel and he wants \$475 million," trumpeted Bill triumphantly. "He's going to make them pay, I tell you, for calling him things like 'Russian lackey' and 'insurrectionist'. Probably coming for you next ..."

"My my," condescended Luke, "wouldn't that be fun. The Great Pretender himself coming to this s...hole country – his words – just to be proven wrong by The Dude! But alas, I fear that CNN will make a fool of him first. Let's see how long Trump's newfound desire to see the inside of a court lasts."

"Well spoken, Lucas my boy," smiled The Prof. "Confidence enough to take on powerful men, I like that."

"Don't forget powerful women," interrupted Miss Lily, reminding our company of Kamala Harris and Hillary Clinton – among others, but excluding Liz Truss.

"What makes you so sure of your case, Luke?" frowned Bob the Book.

"A ha!" exclaimed the Dude, "thank you for that question, Bob my mate," grinned Luke to Bob's irritation. "I'll give you the short answer: CNN was 100% correct with everything they reported on Trump and Russia, and they acted in the public interest. If you wish, I'll prove it."

"You do that, Lucas," encouraged The Prof. "I am rather curious."

"Well then," Luke positioned himself strategically away from the bar: "As also reported by reputable newspapers like the Washington Post and the New York Times – whose journalists won Pulitzer Prizes for their work – Russia's social media army has been on full assault mode disrupting the American democracy and diminish-

ing America's status as leader of the free world. A hard-fought target was the 2016 election – to get Trump in the White House instead of Hillary Clinton. This was confirmed in extensive investigations by the US intelligence services and by the Mueller probe. Although Mueller made no finding on collusion, believing that to be the job of Congress, the facts are in his report. Several guilty parties were sent to prison.

"Also, a bipartisan Senate investigation likewise confirmed that the Kremlin interfered in the election and presented other threats.

"Tellingly, Trump chose to believe Putin's denial rather than the top-level American findings.

"One example of collusion was the nifty Russian response to Trump's request for Clinton's emails. Speaking in front of the TV cameras on 27 July 2016, he looked up to the heavens and said, 'Russia, if you're listening, I hope you're able to find the 30'000 emails that are missing.' Later the same day, Russian hackers broke into emails in Clinton's personal office and also

OPINION

ON THE CONTRARY

The columnist is a journalist and editor based in Onrusrivier. His awards for journalistic excellence include the Mondi and the Sanlam Awards.

Pieter Schoombee



the Clinton campaign offices. Her private emails were made public via Wikileaks the next day.

"And as recently as 29 October, *rawstory.com* reported how a Federal Court jury unanimously condemned Trump's pack of Russian lies – again.

"Enough said."

E-mail: noag@maxitec.co.za

Transparent wood could soon replace plastics



Transparent wood may be a sustainable alternative for glass or plastic used for making windshields, see-through packaging and biomedical devices. Credit: Anish M. Chathoth

By K.S. Harikrishnan, SciDev.Net

TRANSPARENT wood promises to be an environmentally friendly substitute for glass or plastic used for making car windshields, see-through packaging and biomedical devices, according to a study.

Published in the journal *Science of The Total Environment*, the study said transparent wood reduced ecological impacts on the environment because of its renewable and biodegradable properties. It is also said to be cost-efficient as it is five times more efficient than glass thus cutting energy cost significantly.

The world currently produces around 400 million tons of plastic waste each year, with increasing levels of single-use plastic which is used and then discarded, according to the UN Environment Program. Now, transparent wood is emerging as one of the most promising substitute materials of the future.

"Transparent wood as a material can replace the environmentally harmful petroleum-based plastics such as polypropylene, polyvinyl chloride (PVC), acrylic, polyethylene, etc.," said Prodyut Dhar, an author of the study and assistant professor at the Indian

Institute of Technology's biochemical engineering school.

Originally fabricated in 1992 by German scientist Siegfried Fink and since improved upon by other researchers, transparent wood is made by removing the lignin content in wood and replacing it with transparent, plastic materials. Lignin is a naturally occurring biopolymer which supports plant tissue; unlike plastics it can biodegrade and is non-toxic.

"Plastics are used as a substitute for glass which is (naturally) fragile. However, transparent wood is an even better alternative from an ecological perspective as observed in our life-cycle analysis," said Dhar.

According to the authors, production of transparent wood using sodium chlorite to remove lignin from wood and infiltrating it with epoxy infiltration had far less environmental impacts than commonly used methods that rely on the use of methacrylate polymer.

The end-of-life analysis suggests that, transparent wood is less environmentally friendly than glass but is still better than producing polyethylene, indicating the need to improve the production technology, the authors said. Anish M. Chathoth, an assistant professor at

Kerala Agricultural University's College of Forestry, in India, and a transparent wood researcher at the Institute of Wood Science and Technology, Bangalore, said the fabrication of transparent wood has generated a lot of recent interest due to its favourable physical, mechanical and optical properties.

"Transparent wood is mostly developed using thin slices of wood, and has good strength as that of regular wood but is lighter in weight. The scope for imparting multiple and advanced properties through the incor-

poration of specialized materials makes it a unique bio-based substrate for versatile applications," Chathoth told SciDev.Net.

"In recent times transparent wood has been used in construction, energy storage, flexible electronics and packaging applications," said Chathoth, "adding that given the growing concerns about the environmental impact of petroleum-based plastic materials, transparent wood has a role in maintaining environmental sustainability."

Steel mill gases transformed into bioplastic

By Pohang University of Science and Technology (POSTECH)

PLASTIC waste from food deliveries is rapidly polluting the environment. An alternative that has emerged is bioplastic, which is also called biodegradable plastic. Bioplastic that uses eco-friendly raw materials emits less pollutants during the production process and has natural decomposition properties. Recently, a Korea-Spain joint research team recreated bioplastic from waste by-products from gas fermentation from steel mills.

Through joint research with Spain's Center for Research in Agricultural Genomics (CRAG), a research team led by Professor Gyooyeol Jung, Ph.D. candidates Dae-yeol Ye and Jo Hyun Moon, and Dr. Myung Hyun Noh in the Department of Chemical Engineering at POSTECH has developed a technology to generate artificial enzymes from *E. coli*. The joint research then succeeded in mass-producing itaconic acid, a source material for bioplastic, from acetic acid in *E. coli*. This study is published in *Nature Communications*.

Itaconic acid produced by fungi with membrane-enclosed organelles is used as a raw material for various plastics, as well as cosmetics and antibacterial agents. Although its global market value is estimated high at around \$91 million this year, its production

and utilization have been limited due to the complex production process and high cost of production.

For this reason, studies are being actively conducted to produce itaconic acid with industrial microorganisms such as *E. coli*. Although *E. coli* can be produced using inexpensive raw materials and is easy to culture, additional raw materials or processes were required to produce itaconic acid since it lacks membrane-enclosed organelles.

Using biosynthesis, the joint research team developed an artificial enzyme to pave the way for *E. coli* to directly produce itaconic acid without membrane-enclosed organelles. The research results showed that the newly developed enzyme can be used in *E. coli* to produce itaconic acid. With this technology, it is now possible to build a microbial cell factory that can easily produce itaconic acid from cheap and various raw materials.

This research result is evaluated as a key original technology for producing itaconic acid from by-product of gas fermentation products from steel mills, seaweed, as well as agricultural and fishery by-products such as lignocellulosic biomass. By replacing the raw material from petrochemicals with biosynthesized itaconic acid, the new technology is anticipated to contribute to a carbon-neutral society and significantly expand the itaconic acid market.