

Pepsi pops Pioneer offer

FM expert laments

Eskom's woes.



IONEER FOODS, the R20 billion a year consumer brands giant that started as a humble agribusiness in the Swartland, has been snapped up by the mighty PepsiCo, one of the largest food and beverages groups in the world.

Doubles production of

alkoxylation.

PepsiCo will pay \$1.7bn (R23bn) for Pioneer, which boasts PSG controlled Zeder Investments as its biggest shareholder. The deal is the second takeover of a local food group this year, and follows the Coca-Colaaligned International Beverage Company's acquisition of a controlling stake in dairy and beverages group Clover Industries.

Zeder - which holds just over 28% of Pioneer - has already given full support to the deal. Zeder CEO Norman Celliers noted the transaction would be one of PepsiCo's largest acquisitions outside of the US

Celliers stressed the offer was still subject to both Pioneer Foods and Zeder shareholders approving the transaction. But he disclosed that engagement in this regard had been very positive. "We have already received irrevocable undertakings of support from the majority of Zeder shareholders and are confident that the offer will receive the requisite support."

Celliers said the PepsiCo proposal was considered carefully. "We believe that it is a good transaction for all stakeholders. It should enable Pioneer Foods as an organisation, to evolve positively into its next chapter of growth.'

He added: "It is always difficult to decide to sell a strategic investment. It is also not easy to determine the perfect price, but we believe that the offer represents a good premium to shareholders and is in the interest of all stakeholders."

Zeder has been the largest shareholder in Pioneer Foods for almost 13 years and has overseen its strategic expansion and growth to a leading organisation within the South African FMCG (fast moving consumer goods) landscape.

"It is always difficult to decide to sell a strategic investment. It is also not easy to determine the perfect price, but we believe that the offer represents a good premium to shareholders and is in the interest of all

stakeholders."

Pioneer Foods was originally formed in the mid-nineties from the merger of the Sako breads business and Bokomo brands. The brands portfolio now extends to beverages (LiquiFruit, Fruitree, Wild Island, Lipton and Ceres), condiments brand Wellington and Heinz, spreads (Bovril, categories & franchise management).

marmite, Pecks and Redro), dried fruit specialist Safari as well as breakfast brand Weet-Bix, rice brand Spekko, pies (Today, Big Jack and Mamas), White Star maize meal and baking aids Moir's and Maizena. PepsiCo's brands include Frito-Lay, Gatorade, Pepsi-Cola, Quaker and Tropicana. The group's 22 brands generate more than \$1 billion each in estimated annual retail sales.

CBN understands that PepsiCo first mulled a deal with Pioneer around two years ago, but might have been spooked by the political climate of that time.

An official press release confirmed that PepsiCo believed Pioneer Foods had a "robust, locally relevant product portfolio" that complemented the US giant's current brand line-up.

PepsiCo also believes Pioneer will help it gain a solid beachhead for expansion into Sub-Saharan Africa by boosting the company's manufacturing and go-to-market capabilities, enabling scale and distribution.

PepsiCo chairman and CEO Ramon Laguarta said the group added an extraordinary team of associates who would be instrumental to growth across the continent.

"As we look to accelerate our growth in key markets around the world and achieve our vision to "Be the

Global Leader in Convenient Foods and Beverages by Winning with Purpose", we are absolutely thrilled to join forces with Pioneer Foods...'

He said Pioneer Foods represented a differentiated opportunity for PepsiCo, allowing it to immediately scale its business in Africa.

The deal will also allow PepsiCo to expand its Sustainable Farming Program in Africa and work with local farmers in Pioneer Foods's communities.

Tertius Carstens, the CEO of Pioneer, said the proposed PepsiCo deal marked a very exciting milestone. "It highlights the strength of what we have created."

Carstens believed that as part of PepsiCo, Pioneer would have greater scale to expand its leading brands, greater capital to invest in local agriculture and greater access to leading global capabilities.

PepsiCo will create a new operating sector for Sub-Saharan Africa, which will be by Eugene Willemsen (who most recently served as executive vice president of global

Drumming up school's support

Who needs to print

money?



Engen Helderberg Convenience Centre director, Geoff Abrahams with the kitted out drummies and proud school Principal Mr Charlton De Morney.

N raise morale at Sir Lowry's Pass Primary School, Prin-

cipal Charlton De Morney reached out to local businesses to help raise funds for uniforms and props (pom poms, flags, maces and batons) for the school's new drum majorette squad.

Heeding the call, Engen Helderberg Convenience Centre director, Geoff Abrahams funded kits for all 40 members of the team. "I hope that this small token will help uplift learner optimism."

Sir Lowry's Pass Primary School, situated in Sir Lowry's Pass Village outside Somerset West, has 1 312 learners, the majority of which live in informal settlements.

'Our surrounding community are extremely poor with almost 70% of our parents either unemployed or reliant on government grants," says Principal De Morney. "We are a no fee school and our learners find it very difficult to buy their own sports kits.

The funds raised by Engen Hel-derberg Convenience Centre were matched by Engen as part of the company's "Dealer Community Partnership Programme" (DCPP). "We are extremely grateful to Engen for their support and sincerely hope that our newly kitted out drummies

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Drumming up school's support

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team will help raise school spirit and team moral at our sports matches."

Engen's Corporate Social Investment Adhila Manager, Hamdulay says the company encourages and supports its franchisees to get involved and engage with local communities.

"We hope that our contribution helps to enrich and improve the lives of the learners at the school, many of whom live below the breadline."

> "We welcome this generous show of community support and social upliftment by our dealers," adds Hamdulay.



DENEB Investments the Cape Town-based company industrial controlled by empowerment giant Hosken Consolidated Investments (HCI) - appears to be stitching up sustainable profits. Deneb, for the most

part, comprises businesses that were the operational cogs of Cape Towniconic based clothing and manufacturer textile Seardel. Readers may remember that in 2008 HCI rode to the rescue of Seardel that was dangerously mired in debt and injected in new capital into the business just before the group's bankers pulled the plug on proceedings.

Seardel was transformed into Deneb

with a few new additional businesses added to the mix – like Premier Rainwater Goods, Formex and New Just Fun Holdings. The task of turning around Deneb was not easy. Some tough decisions needed to be taken by CEO Stuart Queen - most notably the sale of the clothing manufacturing interests (acquired by the SA Clothing and Textile Workers Union). In recent years Den-

eb – fortunately blessed with a sprawling property portfolio – has started to look a much better group of businesses.

In the latest financial results (to end March 2019). Oueen said Deneb had made some

good progress despite various challenges.

the Specifically, brand distribution businesses - "with a few notable exceptions" struggled with a softer retail environment and saw both turnover and margins under pressure. Queen said Deneb's manufacturing businesses were negatively impacted by the poor economic conditions, which saw demand soften. "This is particularly true for the manufacturing businesses interfacing into the construction and mining sectors."

That said, Deneb reported that turnover from continuing operations was up R409 million (or 16%) to just short of R3 billion. Oprescue.

erating profit before

fair value adjustments

from continuing opera-

tions was up a chunky

Queen said the top

line growth was at-

tributable in part to

acquisitions made in

the prior year. How-

ever, he noted certain

of Deneb's businesses

did manage to achieve

good growth despite

the difficult environ-

ment - most notably

Formex (the automo-

tive component manu-

The group's Epping-

based toy distribution

businesses Prima Toys

and New Just Fun

Group were unfortu-

nately affected by one

of their significant cus-

tomers, Hamleys, being

placed into business

facturing business).

R40 million (or 37%).

Queen said Prima's exposure to Hamleys was some R18 million –although this was mitigated by insurance cover which recouped some R15 million.

While operations look more settled, Deneb looks set for further downscaling. Oueen confirmed the group had started a process that could see a divesting from certain businesses - namely Winelands Textiles, Frame Knitting Manufacturers, Brand ID and First Factory Shops.

He said these (lossmaking) businesses have been put on the market for sale. "We will update shareholders of the progress as and when appropriate."

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casters.

solution.

and AI.

Knife cuts into Granite

CAPE Town-based venture capital funding specialist Knife Capital has made a new investment in warehouse management software solutions provider Granite WMS – a move aimed at accelerating the company's offshore expansion.

Granite WMS is an easy to use barcode-based warehouse management system (WMS) developed by local automated identification business: Technology Cradle Services.

It integrates into various Enterprise Resource Planning (ERP) systems and accounting software packages to expands warehouse operations and business processes that help deliver products on time, accurately and cost-effectively.

The business has 'bootstrapped' been to date, but last month Knife – that invests with various funding partners (including 12J venture company KNF Ventures and family offices) confirmed an undisclosed funding But Knife stressed

it did not follow the conventional venture investment path. Granite was established in 2000 by Craig and Delia Collins to sell barcode scanners, label printers and labels. Driven by the needs of their sizeable and growing SME client base, Granite WMS was developed in 2010 with proprietary technology, embracing best practices but reducing complexity for the user.

The company grew from there to become a leader in SME warehousing solutions, implemented in over 100 sites across three continents and in over 40 different industry sectors.

Craig Collins, CEO and co-founder of Cradle, reckoned the business now has enough traction to aggressively ramp up local and international business development and marketing efforts. Interestingly Cradle was one of the ten companies selected for the fourth cohort of Knife Capital's Grindstone Accelerator – a structured entrepreneurship development programme that assists high-growth innovation-driven SMEs to become sustainable and fundable (see below for the latest Grindstone participant list). tions as well as the It is the second investment that Knife increased need for

Capital has made in a Grindstone company the other being cloudbased ticketing platform Quicket.

Knife investment partner Keet van Zyl said investing in Cradle to scale the Granite WMS solution was an exciting business to add to the venture capital portfolio. "It already achieved sustainability through its business operations with a

efficient forecasting models by small and medium sized companies.

Van Zyl noted that while many warehouse systems were expensive and took considerable time to implement, Granite delivers high end turn-key WMS functionality at an ac-

ceptable price-point. Knife has also announced the new participants for its Grind-

"The Granite SaaS product grew aggressively over the past two years, and discussions with the entrepreneurs evolved into a workable investment case."

35 employees, significant revenue growth and profitability.

Van Zyl said that promising through the Grindstart-up businesses to sustainable profits. stone Programme Knife was impressed This time Knife tapped the Johanby Collins' responsiveness in closing growth nesburg market, and gaps identified and received 400 applications. This far exthe team's capability to turn sales leads into ceeded Knife's exhappy clients. "The pectations, according Granite SaaS product to Andrea Böhmert grew aggressively over co-managing partner at Knife Capital. the past two years, and discussions with the A 30-strong short list was whittled down to entrepreneurs evolved into a workable investthese 10 ventures: ment case." WizzPass: a seam-Van Zyl added less visitor and conthat the market funtractor management damentals were also system focused on resolid - taking advanmoving and improving tage of growth in the on insecure, outdated e-commerce industry, paper and manual sysemerging multichantems. LeadRobot: a data nel distribution channels, globalisation of analytics and marketsupply chain networks, ing automation tool increased adoption of that uses AI (artificial on-cloud WMS soluintelligence).

vides applications and online tools that assist Universities and funders with student selection and fund disbursement.

which

а Crayon: talent-sourcing platform designed from the bottom up to reduce hiring mistakes via a standardised, transparent process that informs both the employer and candidate.

Lula: an app that connects corporate commuters to private shuttles on their way to work.

Farosian: a specialist social media company which partners with businesses to better understand the complexities associated with social media by generating social media screening reports. Grindstone will provide these 10 scaleup companies with knowledge, networks and funding readiness through growth measurement, gap analysis and deep interventions. These are designed to build a foundation for growth, transfer skills, create relevant business networks and enable these companies to take advantage of market access opportunities.



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Cape retailers find traction

CAPE TOWN headquartered retail giants Woolworths and Pepkor have both managed commendable performances in threadbare trading conditions on South Africa.

Woolworths core South African fashion, beauty and home operations grew sales 5.5% in the second half of the year to end June. This is commendable achievement after Woolworths initially looked set for a poor full year performance after registering a decline of 2% in the first half.

Woolworths said the improved performance was driven by a focus on core ranges and basics, backed by improved product availability.

The price movement for the key fashion segment was a slim 2.5%. Encouragingly Wool-

worth food sales momentum continued into the second half with growth of 9%. Comparable sales were up 6.5%.

Woolworths said this was driven by further investment in price, innovation and convenience - which sparked contin-

ued volume growth. But the group noted space growth had been limited in both the fashion and food businesses with the focus on productivity and operating efficiencies.

Pepkor reported its core retail brand PEP market maintained share in the half-year to

end March despite the particularly challenging trading conditions within the discount fashion market sector.

Pepkor said the performance was supported by good growth in Babies and Home departments with strong growth achieved in Fast Moving Consumer Goods (FMCG) and Financial Services.

But a total of 5.3 million cellular handsets were sold during the period, which was below expectation following selling price increases in handsets. Pepkor said corrective action in the form of a selling price reduction supported a recovery in the cellular division

towards the end of the

reporting period. Pepkor re reported PEP's retail store footprint expanded to 2 265 stores - including 47 new stores opened during the period across its traditional PEP, PEP Home and PEP Cell retail formats. This equated to retail space growth of 3.8% yearon-year.

Óverall, Pepkor's clothing and general merchandise segment - hinging heavily on the PEP and Ackerman store chains - reported revenue growth of 5.2% to R23.1 billion. Operating profit increased by 6.6% to R3.1 billion.

Looking ahead to second half trading, Pepkor CEO Leon Lourens said management remained



cautiously optimistic about the retail environment and expected improved consumer confidence in the months following the recent gen-

eral elections. He said the group continued to identify opportunities for growth and expansion. "Pepkor expects

to further expand its store footprint, achieving between 3% and 4% space growth in financial 2019 on a net basis.'

Mettle's sunny disposition | Live 15 years longer

THERE'S a new glow about Bellville-based Mettle, which is best known as a specialist financial services business that is aligned to retail tycoon Christo Wiese.

Mettle recently considerably threw more light on its investment in solar power – a business that, up until now, has largely been seen as a side-line business.

Agreements being signed with the CDC Group Plc - a highly respected and well established private equity investor - suggest there is much more to Mettle Solar businesses MSI and MSA than meets the eye.

If negotiations are successful the private equity investor will take a 40% stake in each of MSI and MSA for R106.7 million.

Mettle currently holds 55% of the issued share capital of the solar businesses Green Create Holdings and the Trigen Group holding 35% and management holding the balance.

After the proposed deal Mettle will dilute its holding in the solar businesses to 33%.

The solar companies focus on the design,

(PV) systems. These the solar companies' solutions range from balance sheets, allowing them to develop

80kWp to 10MWp systems for private consumption to 5MWp systems for public consumption. The solutions are

either grid-connected, hybrid (solar and fuel powered generator) or off-grid (storage) solar PV solutions located across Sub-Saharan Africa and the adjacent Indian Ocean islands. The systems range

from turn-key engineer, procure and construct (EPC) solutions with full performance warranties to fully funded solar PV systems with no capital outlay required by the

their businesses at a faster pace and align the companies with an experienced strategic partner with considerable networks and ex-

perience in investing on the African continent. MSA has completed six projects totalling R61 million in Kenya and the Seychelles, while corporate cousin MSI has completed 22 projects in South Africa and Namibia at a value of R226 million. CBN would presume a good number of these projects are under-

taken at retail outlets

aligned to Wiese's ma-

tential of Mettle's business model. CDC is the UK's development finance institution for Africa and Asia.

The investor is expected to provide a funding line to assist in growing the business across the African continent.

During the next few years it will be interesting to monitor the growth of Mettle's solar operations.

In the year to end February Mettle's solar operations generated revenue of R16.4 million but posted a net loss of R14.4 million. Tin the 2018 financial year revenue was almost R24 million for a loss of R12 million

when free

SOUTH Africa ranks 110 out of 162 countries and territories according to their economic system. Economic Freedom of the World(EFW) index measures the degree to which the policies and institutions of countries support economic freedom. In 2000, South Africa ranked 46th in the world, which meant being in the top 30% of economically free countries. Not only was it high on the index, but it was rising, destined to be one of the world's freest and thus most pros-

perous countries.

Unfortunately, instead of building on its post-apartheid achievement, SA started sliding down the rankings and is now in the bottom 40%. This means that South Africans now have less economic freedom than they had gained by 2000. Sliding down the index condemns countries to lower incomes, greater poverty, more inequality, reduced life expectancy, fewer political rights and liberties and bleak prospects for the

quality of life. "If South Africa is to increase prosperity and

function as freely and efficiently as possible without stifling bureaucracy, and that true judicial independence be restored expeditiously," said Free Market Foundation (FMF) Executive

Director, Leon Louw. Hong Kong and Singapore top the index, continuing their streak as 1st and 2nd respectively. New Zealand, Switzerland, Ireland, the United States, Georgia, Mauritius, the United Kingdom, and Australia with Canada (tying for 10th) complete the top 10.

The index is based on data from 2016 (the most recent year of available data) and measures the economic freedom of 162 countries and territories for which data are available.

The 10 lowest-ranked countries are Sudan, Guinea-Bissau, Angola, Central African Republic, Republic of Congo, Syria, Algeria, Argentina, Libya, and, last-place, Venezuela. Some despotic backward countries such as North Korea and Cuba cannot be ranked due to lack of data. Other notable coun-

tries include Germany

According to peer-reviewed research, people in countries with more economic freedom are more prosperous, enjoy more political and civil liberty, and live longer.

Countries in the top quartile (25%), such as the UK, Japan and Ireland, had per-capita incomes of more than US\$40,000 in 2016 compared with less than US\$6,000 for the bottom quartile, such as Venezuela, Iran and Zimbabwe.

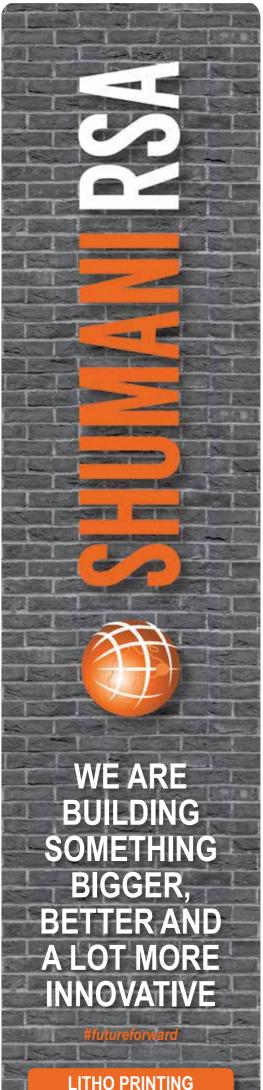
Life expectancy is nearly 80 years in the top quartile compared with just 65 years in the bottom quartile.

"Where people are free to pursue their own opportunities and make their own choices, they lead more prosperous, happier and healthier lives," said Fred McMahon of the Fraser Institute.

South Africa's largest score reductions in economic freedom (where 1 is low and 10 high) are Judicial Independence down from 8.03 to 6.52, Independent Courts from 7.42 to 5,45, and Regulation of Credit from 10.00 to 7.50.

installation, financing reduce unemployment Issued by the Free Marjor investments like CBN suspects this (20th), (41st), client. Japan Mettle reckoned the ket Foundation. www. and maintenance of Shoprite. picture might brighten and poverty, it is essen-France (57th), Ruscommercial and indusproposed transaction CDC's involvement considerably over the tial that the financial sia (87th) and China freemarketfoundation. trial solar photovoltaic will help to strengthen does highlight the ponext five years. (108th). sector be allowed to com.





Eazi Access grows with LMH partnership

LINDE MATERIAL HANDLING (LMH) has appointed Eazi Access as their exclusive distributor for South Africa.

As one of the world's largest manufacturers of forklift trucks and warehouse equipment specialising in industrial trucks, fleet management, driver assistance systems and service offerings, LMH found that Easy Access approach and commitment to provide innovative, safe, bespoke access and materialhandling solutions, 16 year track record and 18 branch sub-Saharan footprint, made them a

perfect partner. Marcus Green, Eazi' Access' General Manager for Rental & Sales Support, says the two companies share the same ethical values and high technical standards.

"Eazi Access is a

premium brand distributor that offers a differentiated service offering to our customers and LMH is known worldwide as the 'Rolls Royce' of forklifts. Partnering with this brand is an extension of what we've done with other industry leaders like JLG, Magni, Maeda and JCB," he explains.

What the new partnership entails

Marcus explained that the partnership with LMH will advance its business offering in four areas:

"Our fleet: We'll be making over 59 new products available to our customers. Forklifts are only one of LMH's areas of expertise and the warehousing opportunities we can tap into (such as lithium ion and robotic options) can further



differentiate our technical abilities.

"Our growth: Leveraging the forklift market in South Africa gives us the chance to grow not only our turnover but also our range of rental, sales, service and training options to our customers.

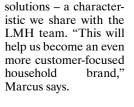
"Our industries: The enhanced product range presents the op-

Technical Expertise Superior Service PART OF

portunity to penetrate mining, heavy and light industries as a single point of contact - a one-stop-solution shop - for our customers, across various sectors. "Our innovation: As

a brand we are always looking at new ways to be at the forefront of technology so that we can provide safer and more customer-focused

EVERY PROCESS



An impressive range of machines

LMH maintains a wide variety of advanced machine engineered types, each designed with safety, efficiency productivity in and mind. These include:

- Diesel, LPG and electric counterbalanced lift trucks, designed to carry loads between 1t to 18t.
- Electric reach trucks that provide versatile narrowaisle handling, ergonomically designed operator facilities, great uptime ratios with solutions up to 13.7m.

Customer benefits

"The combined elements of a solutionbased approach from a wide range of well-established brands, flexible purchase and rental options and highly trained staff have successfully grown the business despite the current generally poor economic conditions. This is particularly the case in the Cape where we have supplied such diverse industries including the film and entertainment sectors

Going Above and Beyond to Enhance Your **Operational Efficiency** Over the past 4 decades BMG has built up extensive product divisions and ion network, along with a rockrce of supply to the full spectrum of industry

et and applied this technical knowledge toward the maximisat ncy, productivity and ul

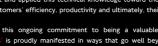
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"This new partnership allows us to provide an even wider product offering to our customers. For LMH it was critical to partner with a brand that is growing into a full Africa solutions provider and able to maximise African opportunities. With Eazi Access, Linde Material Handling can rest assured they are partnering with a customer-focused, solutions-driven business," he concludes.

A safe and dignified school environment

THE need for school infrastructure support is overwhelming. Kwikspace is currently servicing orders for classrooms and ablutions. Kwikspace's selfcontained ablutions replace pit latrines. "A safe and dignified environment school is part of the right to education," says Mico Botha, Kwikspace Regional Manager, Cape "Kwikspace Town. takes great pride in being able to provide safe spaces for children to learn and grow."

Kwikspace offers innovative prefabricated modular products as alternative building solutions for any sector requirement and all infrastructure needs. Kwikspace's efficiency, quality products and exceptional service make them preferred suppliers for the Department of Education in the Western Cape. Kwikspace's modular classrooms and ablutions have assisted over 150 000 learners throughout South Africa receive schooling in a safe and dignified environment. Kwikspace manu-

Kwikspace manufactures prefabricated modular classrooms that are safe, hygienic and learner-friendly, in under four weeks. High-quality polyurethane injected pan-

els provide excellent thermal insulation and noise reduction with a lower carbon footprint.

"A safe and dignified school environment is part of the right to education,"...

They are effective in preventing dust, water and insects, making them an ideal mobile learning environment. Panels are coated in 0.5 mm Aluzinc painted steel, providing improved corrosion resistance and increased durability. Lighting, electrical plug points for teaching aids, blackboards and pin boards are standard with all modular school buildings.

"Modular prefabricated buildings are as comfortable as traditional buildings and our panels are easily cleaned, hygienic and require low maintenance. All electrical fittings like lights, light switches, plug sockets and required cabling come standard with each Kwikspace modular prefabricated ablutions. Our ablution facilities are connected to a sewer system or conservancy tank" explained Botha.



Kwikspace ablutions enable learners access to dignified, clean and safe bathrooms.

Improved design and efficiency tips balance toward HV motor replacement

THE applications knowledge of Zest WEG Group, coupled with the design capability of parent company WEG, now make it easier than ever for old high voltage (HV) motors to be replaced with new, improved HV machines within the customer's existing footprint and operational configuration.

Compared to HV machines designed 20 to 30 years ago, advances in technology allow for these HV units to often be manufactured smaller than the originals, says David Spohr, Zest WEG Group's newly appointed business development executive. He works with customers to optimise their HV motor operations.

WEG's HV motors are typically purposebuilt to meet the precise needs of the customer. While smaller in dimensions compared to the original older HV motors, these motors still deliver the required performance at even higher output and efficiencies.

"As a leading technology provider of a wide range of motor products, we have the design and efficiency, however, present a compelling case for the replacement of old units rather than repeated repairs.

Spohr highlights that the cost of a major motor overhaul could be up to 60% of the cost of replacement. The advanced technology of the new units, however, brings important benefits. Key among these are reliability and efficiency, which means improved operational performance and direct savings in energy consumption

"When motor failures occur, Zest WEG Group has the ability to conduct a detailed on-site analysis," Spohr says. "Based on a rootcause analysis, we can provide a failure assessment which will enable the customer to make an informed decision."

The assessment includes an energy consumption analysis conducted with specialised software. In the light of the machine's application, Zest WEG Group recommends enhancements for greater control and efficiency. These include motor control options such as variable speed drives (VSD) for applications such as fans and pumps.

"There are also significant productivity benefits from a new, more reliable motor," says Spohr. "Unplanned downtime can severely erode plant performance, reduce output and risk supply relationships with customers. All this needs to be considered in the decision to continue repairing old motors.'



WEG wound rotor induction motor installed on site.



capability to design a replacement motor to match the footprint of the original unit," Spohr says. "This means it is not necessary for the customer to modify mechanical infrastructure or electrical design to accommodate an upgraded motor."

He notes that, with the design lifespan of electric motors which ranges between 20 to 30 years, there are still many old units in operation around South Africa. Technological improvements in motor Zest WEG Group has been servicing the agricultural sector for more than 35 years with its range of robustly engineered products.

All products, designed using modern technology, offer farmers optimum reliability coupled with excellent energy efficiency. From WEG Premium Efficiency electric motors to WWash electric motors with WEG Variable Speed Drives, all have developed a reputation for solid performance in the most demanding conditions. Low maintenance requirements as well as ease of serviceability allow reduced total cost of ownership to the agricultural sector.



What will 5G really mean for you?

By Ernst Wittmann, **Global Account Direc**tor MEA & Country Manager – Southern Africa, at TCL

OVER the past few months, we have seen a storm of hype about 5G, the next evolution in mobile network technology. Handset manufacturers are starting to come to market with 5G-ready smartphones, while many mobile network operators worldwide looking to deploy 5G networks in 2019 and 2020. KT in Korea, Rain in South Africa and Swisscom in Switzerland are examples of operators that have already launched com-

mercial 5G services. So what's all the fuss about? Let's start with speed. The companies that make network equipment for the operators estimate that 5G could initially deliver connections that are 10 to 20 times faster than 4G in a real-world setting (as opposed to some of the theoretical numbers that get thrown about). These speeds could increase in the years to come as

operators deploy standalone 5G networks running at higher frequencies.

This boost in speed will be welcome for mobile consumers who want to make use of applications such as ultrahigh definition video streaming and conferencing, virtual reality, and streaming of online games through services such as Google's upcoming Stadia. It could also help to turn 5G into a serious alternative to fibre in selected areas where it is too difficult or expensive to roll out fixed-line infrastructure.

But it will not be a quick fix for rural networks because its transfer distance is shorter than 4G or 3G. While 5G will boost speeds, it does require multiple towers to be close together to perform to its potential. That means that urban South Africans will be the ones who benefit from it most, at least when it is initially launched.

Less lag and delay

5G will also deliver a significant improvement in network latency-the delay between the time it takes for a packet of data to travel between network points. Lower latency will improve your experience with services such as VOIP calls (less jitter, echoing and delays), online gaming (less of 'lag' between pushing a button and

seeing a response on

screen) and video (less glitching and jerkiness). But the real gamechanging potential lies in how the enhanced speed and latency of 5G could enable new services-including some that we have not yet envisioned. The networking standard will be the foundation on top of which organisations, cities and governments will build truly intelligent networks of cars, robots, drones, wearable computers, sensors and more.

These devices will be able to communicate and react in real time, bringing the full potential of the Internet of Things to life. For example, 5G will help autonomous (selfdriving cars) vehicles to communicate with each

other, read live map and traffic data, and use video vision to safely navigate the roads. That all lies a few years in the future.

A long road ahead

When it comes to South Africa. widespread commercial availability of 5G may be some way off. Most of the larger network operators have piloted 5G, but are appealing to the regulator, ICASA, for network spectrum so that they can deploy it more widely. It seems likely that the evolution to 5G will be a gradual one, as was the transition to LTE/4G and 3G before it.

We'll see 5G networks appearing in the major cities, at first, followed by wider national rollouts. Initially, the technology may make a difference only to early adopters who are already trying out 4K video streaming and virtual reality. But in less than five years from now, 5G will become ubiquitous and many of us will take its speed and the applications it enables for granted.

Hybrid bearing life model

SKF has unveiled a pioneering model that, for the first time, enables the working life of hybrid bearings to be determined more realistically.

Called the Generalized Bearing Life Model (GBLM), its development will ensure that SKF customers and distributors choose the right bearing for the right application, every time.

Until now, it has been difficult for engineers to predict whether a hybrid bearing will outperform a steel one in a given application, or whether the possible performance benefits that hybrid bearings enable are worth the extra investment they require. The conventional equations engineers use to calculate the rating life of a bearing do not reflect the real-world performance of hybrid designs.

To rectify this issue, in 2012 engineers at SKF started to develop what would become Generalized Bearing Life Model, or GBLM. A primary version of the model was presented at the Hannover Messe in 2015, but at this stage the mod-



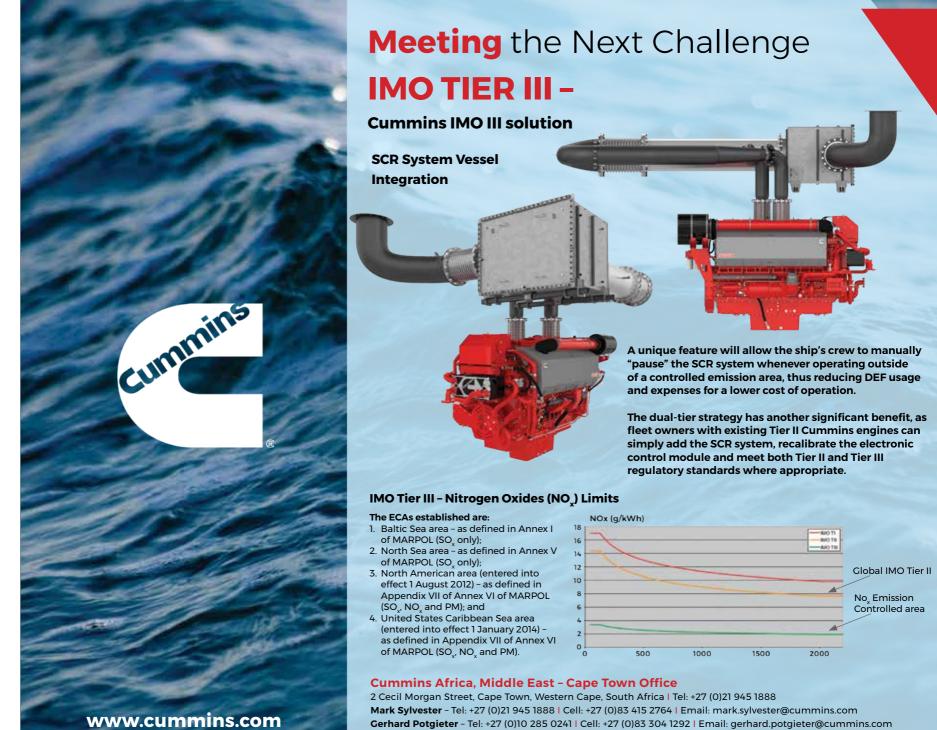
el was not ready yet to perform calculations for hybrid bearings. Four additional years were needed by scientists and technicians at SKF's facilities in the Netherlands and Austria to incorporate this feature into GBLM.

Using GBLM, SKF engineers have been able to determine the real-world benefits hybrid bearings can have. In the case of a poorly lubricated pump bearing, for instance, the rating life of a hybrid bearing can be up to eight times that of a steel equivalent. For a screw compressor bearing running with contaminated lubricant, meanwhile, the hybrid offers a rating lifetime a hundred times greater than a conventional steel

bearing. "SKF has always been at the forefront of de-

veloping new methods for calculating bearing life", says Guillermo Morales-Espejel, Principal Scientist at SKF Research and Technology Development. "GBLM is a giant leap for bearing science and will enable better choices to be made when selecting bearings for a wide variety of applications."

Now, through SKF Bearing Select, this capability is available to SKF customers and distributers. SKF Bearing Select can be used to model hybrid deep-groove ball bearings and hybrid cylindrical roller bearings and can be found at www.skfbearingselect.com More advanced calculations are available in SKF internal calculation tools to support application engineers in customer projects.



Opening of new WMFTG office and peristaltic wet lab

WATSON-MAR-LOW Fluid Technology Group (WMFTG) has opened a new, larger office, servicing facility and "Wet Lab" demonstration area in South Africa. The company claims world leadership in niche peristaltic and sinusoidal pumps, and associated fluid path technologies. Founded on nearly 60 years of supplying engineering and process expertise, the Group has more than one million pumps installed worldwide.

The new, larger premises - totalling more than 2 300 m² - will provide additional levels of technical support and service for the Bredel range of high-pressure hose pumps, MasoSine sinusoidal pumps and Watson-Marlow peristaltic pumps and tubing.

Located in Laser Park, Honeydew, on the West Rand, the office will be staffed by a team of 28 led by Nico van Schalkwyk, General Manager, who has been with the company since 1989. It incorporates space for 'clean' stores for products, as well as



dedicated receiving and dispatch areas.

Along with extra space for warehousing and pump servicing, the new facility incorporates a fully equipped training center and test lab. This area has been designed to deliver operation and maintenance training to WM-FTG's own staff as well as distributors and customers.

Said van Schalkwyk, "This is a very exciting time for my team and I. We're delighted that the investment in additional facilities allows us to offer a much deeper level of support to our many customers. I am particularly proud that we are offering the first peristaltic test lab in South Africa and which will

keep us one step ahead our competitors."

WMFTG comprises ten established brands, each with their own area of expertise, but together offering customers an comprehensive breadth of solutions for their pumping applications comprising: • Watson-Marlow

- Pumps: peristaltic tube pumps for biotechnology and pharmaceutical and process industries Watson-Marlow
- Tubing: precision tubing for pumping and other purposes, in a range of materials
- Bredel: high flow, heavy duty hose pumps

Alitea: unique per-

istaltic solutions for OEM customers

- Flexicon: aseptic filling and capping systems
- MasoSine: gentle sinusoidal pumps for food, chemical and cosmetics applications
- BioPure: advanced single-use tubing connector systems
- ASEPCO: aseptic valves for the biotechnology and pharmaceutical industry
- FlowSmart: high purity sanitary gaskets, silicone transfer tubing and reinforced silicone hoses
- Aflex Hose: specialises in the design and manufacture of PTFE-lined flexible hoses
- WMFTG has a global network of operations including ten factories and 37 direct sales offices.

The company is part of the Spirax-Sarco Engineering plc group, headquartered in Cornwall, UK.

ci From Michael King: pe Head of Reprise Digital South Africa, in an IPG Mediabrands do

company WHEN thinking 'search', you'd be forgiven for assuming that Google leads the pack. A global study has shown that consumers begin their retail related searches on Amazon first (46%) followed by Google searches (34%). That may seem surprising considering that Google has traditionally dominated the online product search space – that is up until a few years ago when Amazon grew exponentially and became the front runner for retail related searches.

Between 2015 and 2018 Amazon grew from 46% to 54% with Google declining from 54% to 46%. Amazon is so popular that the site has grown 46% per annum with ad spend on the site reaching \$6.3 billion. These are impressive figures indeed, espe-

cially over such a short period of time.

Amazon beats Google

in the eRetail search

Consumer purchasing behaviour has unchanged doubtedly over the past few years with more and more people (87% in 2018) beginning their product searches on a digital channel vs 71% in 2017. If we look at local online behaviour here in South Africa we can absolutely see the same pattern emerging.

It's not all doom and gloom for Google though - they remain the search powerhouse with just over 1.2 trillion overall queries captured compared to Amazon's 2.6 billion product related searches. 35% of Google's searches resulted in actual transactions within five days versus a 20% transaction rate from Amazon. If local brands follow the online purchase funnel. these results are not extreme in the least and can in fact only improve.

In the future we predict that Google Images and image-based apps will play a bigger role in product searches. We've also seen an increase in voice search at a global level and it's only a matter of time before this morphs into visual shopping. What this new purchase behaviour will look like is still unclear but the capability to take a picture and get immediate product related information already exists. This is before we even look at AI and how it has the potential to change the shopping game com-

pletely. There's no clear indication (yet) that Amazon will reach South Africa's shores but this is telling consumer behaviour that retailers should be cognisant of. It's interesting to note that as an example, Takealot has had been growing at a compound rate of 107% over the last few years, and by all indications e-retail behaviour in South Africa is following the same kind of trend

Stainless steel v coated carbon steel

STAINLESS steel is often seen as an expensive material but, with the development of many new grades, using stainless steel instead of carbon/mild steel now has many advantages as well as cost benefits. Stainless steel is always worth considering for a product, process or project for many reasons.

- These include:
- Aesthetically pleasing
- Corrosion resistance, not affected

by scratches and scuff marks.

- No extra cost or extra lead time needed for coatings.
- On site or additional work can be done without re-applying the coating.
- No holes need to be drilled in the end product for galvanising
- Environmentally friendly with long life

The first advantage, although not necessar-

is that stainless steel is aesthetically the more appealing of the two materials, with a clean, shiny, hygienic and professional look, used in architecture, interior décor, for balustrades and shopfitting. Probably the most important advantage is that stainless steel has a passive film that heals itself with the presence of oxygen. This corrosion resistance allows the stainless steel to outlast carbon steel by many years - almost entirely

ily the most important,

maintenance free.

In order for carbon steel to be corrosion resistant, it must be coated, usually either zinc coatings - primarily galvanising - or primers, enamel topcoats and powder coating. Most of the coatings cannot be applied on site and need to be sent away to be done by another applicator.

This could involve lengthy lead times, damage during transit or processing and the inclusion of immaterial features, such as drilled holes, to facilitate hanging in ovens or zinc baths.

For the carbon steel to have the same long life cycle as the stainless steel, the galvanising would have to be a sufficiently thick application, which could result in a heavier finished product.

Rand value per kg

A cost model for sheets of Galvanized Carbon Steel vs 3CR12 (EN 1.4003) Stainless Steel shows the stainless steel cost is almost equivalent to the car-

bon steel cost + cost of galvanising/coating.

With the develop-

ment of many new

stainless steels in the

last decade, customers

are spoilt for choice.

from Ferritic to Duplex

stainless steels - such as

LDX 2101 - which have

high tensile strengths

thinner and lighter

gauges to be used, re-

ducing cost. In addi-

tion, Duplexes have less

Nickel and are consid-

erably cheaper, with

slightly better corrosion

properties than 316.

New

(480mPA)

grades range

allowing

This makes stainless steel a cost-effective alternative to coated carbon steel.

If we look at this *up*front cost-effectiveness on a *life cycle* costing basis, taking into consideration any maintenance or recoating in the future, the case for stainless steel is beyond question.

NDE's many years in business have proved the veracity of this claim and its experience and free technical advice is readily available to all NDE customers.





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How LNG could change South Africa's fortunes

By Marie Blanche Ting, **Doctoral researcher**, University of Sussex.

THE development of liquefied natural gas (LNG) could help transform the South African economy, spur re-industrialisation, reduce the country's overreliance on coal-fired power stations, and contribute to increased regional trade.

South Africa has in recent years run into electricity shortages, forcing the country's utility to burn expensive diesel to keep the lights on. A major polluter, the country also relies on coal to generate almost 90% of electricity. On top of this, South Africa has lost its manufacturing competitive edge, which was built on relatively cheap electricity and behind protective trade walls. Electricity prices have increased substantially over the past decade to pay for the power utility Eskom's two new coalfired power stations.

Liquefied natural gas could change South Africa's fortunes. And government recognises this. Policy developments in recent years have factored in an increasingly greater role for liquefied natural gas in the country's energy mix and the overall economy, both as a clean alternative energy source and as a spur to industrial devel-

opment. The southern African region, specifically Mozambique which already has a pipeline to South Africa, could be the major supplier of gas to South Africa.

In my recent research I argue that to develop a liquefied natural gas sector South Africa could re-purpose existing institutions, namely those relating to the country's established liquid fuels industry. The research traced

the evolution of gas developments in the country from 1998 to 2018. It found a close interaction between the electric and the liquid fuels sectors. At present gas contributes about 3% to the country's primary energy mix, but there are indications that it will feature more prominently over the next decade.

reasons for pursuing gas. They include:

- energy diversification and security to reduce the country's dependence on coal for electricity;
- reduction of Green House Gas emissions:
- provision of flexibility to the introduction of renewable generation into the electricity grid; and facilitating the devel-
- opment of provincial industrial hubs and regional trade within the Southern African Development Community.

Three phases of gas development

South Africa's history with gas can be delineated into three periods. Firstly, from 1998-2005, South Africa significantly reformed its energy sector. This included the 1998 white paper on energy, which recognised natural gas as an option to diversify the country's energy mix. In 2001 the Gas Act was implemented, facilitat-

There are number of ing the development of gas infrastructure in the country through pipelines and the regulatory framework.

> Significantly, in 2004, a pipeline between Mozambique and South Africa began pumping gas. Sasol, a dominant player in the country's liquid fuels industry, was behind the 865 km gas pipeline. While the majority of gas transported through the pipeline goes to Sasol, the pipeline has nonetheless created demand to around 370 industrial and commercial customers via 530 off-take points.

The second phase covers 2006 - 2012. This is when gas started to feature more strongly in South Africa's energy policy. A few turning points occurred. One was the substantial shale gas potential reported by the United States information energy agency. This encouraged policy makers to include gas into the energy mix. Second, natural gas discoveries in Mozambique and Tanzania raised the potential for regional trade.

Thirdly, South Africa

experienced an electricity crisis, culminating in blackouts in 2008. In response, the state power utility Eskom turned to the costly diesel Open Cycle Gas Turbines. But this was hugely expensive and Eskom burnt through its operating budgets to ensure a steady supply of electricity.

Global trends: the main driver

During the third phase, from 2013 to 2018, gas development started to gain momentum driven by major global trends. These include the trend toward liquefaction of gas which enabled transportation of gas to places where pipelines weren't possible.

Secondly, gas prices began changing from long-term to short-term contracts. This opened up the trading of gas to a competitive, spot market. As a result, new buyers have been attracted into the sector.

Thus, by 2015, the Department of Energy had announced the Gas Independent Power Procure-Producers

ment Programme (Gas I4P) with a procurement of 3.7 GW electricity generation.

By August 2018 the country's draft integrated resources plan had gas playing a significant role in future electricity generation. The indications were that gas would contribute as much as 15% of the installed capacity mix by 2030. This seems to suggest that energy policy makers believe gas to power has the necessary fit, form and compatibility with

the electricity system. Another factor that's driven interest in gas is the belief that it could be the country's next commodity resource, as the country's mining future is in decline. Some actors in the oil and gas community are pushing for the country's mining skills to be used in the gas sector. This is informed by the view that the exploration and drilling skills used in the gas fields are similar to those used in mining.

The future

South Africa's existing institutional infrastrucvelop the liquefied natural gas industry. That won't be an easy task. There are major efforts required to amend the Gas Act, the Ports Act, Mineral and Petroleum Resources Development Act, and the Electricity Regulations Act, in order to accommodate the LNG initiative.

ture can be used to de-

Gas can also play an important role in the restructuring of the electricity system. As there are trends towards transactive energy, where utilities moves towards customer centric demand, in that grids become less passive and deterministic, and more active and stochastic. Here gas could play a crucial role, as it has features which are flexible and modular enabling a decentralised system. Lastly, there are opportunities for gas as potential feed-stock in industrial processes, which requires strategic reassessment of existing industries.

Article originally published in The Conversation.

New name for rig repair business

THE years 2018 and 2019 have been strategically momentous ones for EBH Namibia. From the previous position of having South African shareholding, the company has moved to become a wholly Namibian-owned company, with 100% of the shareholding jointly

held by the EBH Consortium and the Namibian Ports Authority (Namport).

At this juncture, the company has also taken the opportunity to rebrand itself, and is changing its name to Namdock.

The year began on a high note with a ma-

jor repair project from Sapura Energy, a completely new addition to Namdock's customer base. "We were delighted to be able to an-

nounce the successful conclusion of the agreement with Sapura Energy, as it acknowledges EBHN's high levels of expertise and experi-

ence in servicing the maritime oil and gas industry," explains EBHN Acting CEO Heritha Nankole Muyoba.

The new project involved the reactivation of the SKD Jaya rig, a semi-submersible tenassisted drilling der unit. This vessel had been cold-stacked offshore of Trinidad for the past few years.

A four-man EBHN team flew to Trinidad to carry out a rapid but thorough assessment of the scope of work needed on the SKD Jaya; after which the rig was transported to Walvis Bay on the heavylift vessel, the Hua Hai Long.

The complexity of reactivating a rig such as this is considerable as, at 94 m long, 36 m wide and more than 20 m high, it is a very large structure.



The EBH Namibia team were charged with not only restoring the SKD Java to seaworthy condition, but also ensuring that it was safe and fully compliant with maritime legislation.

er-units consisting of six Caterpillar diesels, with further power supplied by two 2 000 kVA generators; while the two cranes on its superstructure have 51

The Namdock team were charged not only with restoring this vessel to a seaworthy condition; but also with ensuring that it was safe and fully com-

required adhering to a scope of work that was highly complex and involved a range of disciplines including rigging, fabrication, electrical and mechani-

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An indication of its m and 42 m booms repliant with maritime cal work, carpentry and spectively. legislation. To do this size are its main powpainting.

The connected future of gas supply

MJ Strydom tells the story

YOU won't believe what our Afrox gas cylinders will soon be able to do. They will know when the gas inside them is getting low and they can send the gas supplier a message to deliver a full cylinder as soon as possible. Does this sound like

science fiction from another planet? No, this is already being tested through a secure Internet portal between our customers and Afrox's gas ordering system. Hosted by a contracted telemetry provider, the portal offers real time updates on gas pressure and a host of other parameters.

Machine to machine Internet connectivity

between gas users and their supplier will ensure that the gas they depend on never runs out. When using an Afrox HiQ gas mixture to cultivate an embryo during IVF, for example, not only does the temperature and humidity have to be very accurately controlled, but the whole of the IVF process will fail if the gas supply is interrupted. Traditionally, these

critical are handled by keeping a back-up gas supply connected on site so that as soon as the pressure in the active cylinder drops too low, the backup cylinder is immediately available. By sending an alert to Afrox's always-online ordering portal, however, the risks of running out of a critical gas will be almost eliminated.

Sasol opens new plant in China

recently SASOL opened its new alkoxylation plant in Nanjing. This facility - the company's largest expansion project in China - will more than double its alkoxylation production capacity in the region and will be supported by growing research and development and technical customer support capabilities.

Located at the Nanjing Jiangbei New Material Hi-Tech Park (formerly known as Nanjing Chemical Industrial Park), construction of this 14 ha site commenced in June 2017 and the plant reached beneficial operation in April this year. The plant will expand Sasol's current alkoxvlation capability to approximately 150 kilotons per annum (ktpa), with additional facilities for the production of anionic surfactants.

The new plant can operate using either branched or linear alcohols to meet the differentiated customer requirements in applications such as detergents, personal care, textile and leather, metalworking and lubrication, inks, paints and coatings, as well oil and gas, enhanced oil recovery and industrial cleaning.

As the first fully Sasol-owned production facility in Asia, Sasol has been a producer of surfactants, including

E-house for oil & gas sector

SHAW CONTROLS has designed, engineered, manufactured and supplied a fit-forpurpose Ehouse solution into an oil and gas sector application at a major South African port.

Richards, Bevan managing director of Shaw Controls, says using a draft concept supplied by the customer the company has taken its E-house design and manufacturing capabilities to new heights.

non-ionic alcohol ethoxylates as well as anionic alcohol ether sulfates, in China since 1992. The project is not only a significant expansion of Sasol's current operational footprint in the market, but also the first step towards a robust, differentiated expansion strategy for Sasol's Performance Chemicals business throughout the

broader Asian region. "Comprising stateof-the-art process technology, the plant will operate to the highest standards of operational safety, reliability and flexibility. Furthermore, this technology allows us to minimise environmental impacts in full compliance with stringent environmental protection measures set by

the government," said Shentu Hongxing, Vice President Operations China and Managing Director Sasol China. "We look forward to making a larger contribution to both the regional economy and a greener environment – all while continuing to serve our customers with high quality tailored solutions."



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Shaw Controls was responsible for the complete mechanical and electrical design as well as manufacture of this E-house solution which comprises five modules.

Richards says probably in a 'first' for South Africa and accommodating space constraints on site, the design is a multi-level construction which will be fitted onto the available footprint. This E-house solution comprises three modules at ground level with two above.

New carbon tax is unconstitutional, should be challenged

THE constitutionality of the new Carbon Tax Act, signed into law by the President on 1 June 2019, should be challenged on the basis of flawed procedural grounds.

This is according to Matthew Burnell, environmental law expert at law firm Herbert Smith Freehills.

Burnell explains that the law's fatal constitutional flaw lies in the fact that, despite its name, the carbon tax is not a tax at all.

"Rather, it is a regulatory tool aimed at changing the public's behaviour and nudging South Africa into a low carbon economy. While this distinction may be considered, by some, semantics, it is the chink in the Carbon Tax Act's armour that can be used to successfully challenge its constitutionality."

The flaw in the con-

stitutional process, in respect of the Carbon Tax Act, arose when the Carbon Tax Bill was first introduced into Parliament. Any new bill must be classified as a national bill, a bill affecting the provinces, a money bill or a bill amending the constitution. The consultation and voting processes associated with each of these classifications varies. As a result, the Constitutional Court has held that any bill that is incorrectly classified and passed by Parliament in terms of the incorrect process will always be unconstitutional and invalid, irrespective of whether or not Parliament acted in

good faith. The Carbon Tax Bill was introduced into Parliament by the Minister of Finance and classified and passed by Parliament as a money bill. Bills, however, may

only be tagged as money bills in circumstances where their 'dominant object' is to raise revenue for the State. The Constitutional Court has previously held that a bill is not considered a money bill where its primary object is to regulate behaviour or conduct.

The Act's dominant purpose, however, is not to generate revenue. Its sole purpose is to shift consumers into a low carbon economy and reduce pollution in order to meet the Government's undertakings in terms of the Paris Agreement. This is clear from the Act's preamble and the explanatory memorandum published with the Carbon Tax Bill. As a result, the Carbon Tax Bill was incorrectly tagged as a money bill and has been passed through Parliament in terms of the

wrong procedure.

Burnell says, "Whilst the objectives of the Act may ultimately result in a low carbon economy, the timing of the tax is inappropriate given the current state of the economy and the unresolved practical difficulties associated with the tax. Major issues impacting on the implementation of the Act include the fact that the associated regulations have not been finalised and the conflicts between the Bill and the proposed climate change legislation have not been resolved. In fact, the greenhouse gas emission levels are well below predicted levels due to a sluggish economy."

Since then, the practicalities of trying to implement, budget and cater for the tax are becoming a reality for many companies. On their behalf, business and industry associations are expressing opposition to the tax for the grounds set out above. However, National Treasury has remained resolute in its decision to implement the tax, indicating that the concerns mentioned will be resolved by the time the tax is payable.

"While these concerns and the effect that they may have on business were raised by various industries during the limited public engagement processes, they appear to have been ignored by Parliament. A challenge to the Act based on the flawed procedure may afford industry a second chance at having their interests properly considered, and therefore. the constitutionality of the Act should be challenged in court".

\$30bn LNG project to start in 2022

HON. Dr Medard D Kalemani, Tanzania's ra Minister of Energy, has b confirmed his attendance at the Tanzania o Oil and Gas Congress th this October where he will give updates on w the recently announced p plans for a syndicate of p oil companies to commence construction of vir the \$30bn LNG project p in 2022. ra

In March, the government stated that it planned to complete negotiations with a group of international oil companies in September to develop the project. Led by Norwegian energy firm, and Platinum Sponsor of the Congress, Equinor, the group also consists of Royal Dutch Shell, ExxonMobil, Ophir Energy and Pavilion Energy.

These international companies will work closely on the project, alongside the state-run Tanzania Petroleum Development Corporation (TPDC). In a budget presentation to parliament, the Honourable Minister stated that the project aims conclude in 2028 and will have capacity to produce 10 million tons per annum of LNG.

Currently, each individual investor of the project is holding separate talks with the government negotiation team. These talks are expected to be finalised within seven months.

According to the Bank of Tanzania, work on the project will increase annual economic growth, which currently stands at around 7%, by another two percentage points.

Those keen to learn more about the movements in Tanzania's gas market would find it beneficial to attend the Tanzania Oil & Gas Congress, taking place in Dar es Salaam on 2 -3 October 2019.



NGBP Ex n LED Luminaire, certified for use in Hazardous Zone 2, 21 & 22 areas and can be used as a bulkhead, high bay or floodlight.

What makes an area hazardous?

Norland Lighting throws some light on the subject.

A lot more goes into the right industrial a know lighting solution than you may realise, and when working in a hazardous environment, these considerations become all the more So, let

complex. me Finding the right as lighting for an indus-

trial setting requires a knowledge of what makes it hazardous, so that a solution that works can be used to keep the environment protected.

So, let's take a moment to understand the aspects that make an area hazardous.

Obscured hazards and obstacles

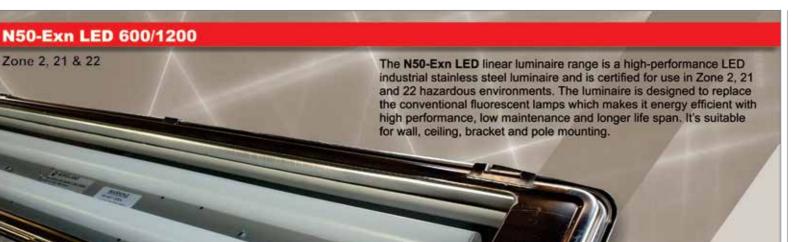
Each factory or industrial setting comes with its own unique hazards where layout and equipment are concerned.

Poorly lit areas make this all the more

dangerous, since personnel are unable to navigate dangerous

spaces safely if they cannot see clearly. For any areas where dangerous equipment is being used, or even

dangerous equipment is being used, or even where the layout of the floor incorporates steps or obstacles, the



area needs to be clearly lit.

Volatile or combustible materials

Where plants or factories are working with and handling hazardous materials, specialised lighting should be used to avoid these liquids, vapours and fibres from becoming dangerous.

Much of the time, these materials can mix with just the right amount of oxygen to pose a risk of combustion when they come into contact with a heat source, and when they do, the entire facility, its equipment and all personnel are at serious risk.

Hazardous lighting solutions that are designed specifically for these types of environments should always be used in such a setting.



Get the right lighting for your protection

In areas that pose the dangers mentioned above, facilities need to have the correct lighting solutions in place to ensure that its kept safe.

Hazardous lighting solutions ensure that materials in the air are kept away from the light, which is, after all, an ignition source, significantly reducing the risk of any unfortunate events.

stitutional shareholder

support to justify the

regulatory processes,

listing requirements,

compliance costs and

associated costs with

Property back in play

THERE has been some moving and shaking among smaller Cape Town-based property groups over the last few weeks.

Fairvest - which specialises in retail properties located outside the main suburban nodes has agreed to pursue a "friendly merger" with rival retail real estate group Safari.

Pretoriasense as Safari based and Fairvest both focus on lower LSM (livings standard measure) retail properties. Both consider companies their respective management teams and operational platforms as synergistic and reckon the proposed merger will unlock enhanced efficiencies in the management of both com-

The deal makes panies' property portfolios.

The enlarged team will be headed by Fairvest's CEO Darren Wilder with Safari's Dirk Engelbrecht as chief operating officer and Fairvest's Jacques Kriel as chief financial

officer. Fairvest said the merger would allow for some immediate cost savings. Over time there would also be a realisation of improved funding costs and other efficiencies as a result of greater critical mass.

Fairvest's Western Cape-based properties include Omniplace in Belville, Tokai Junction, Nyanga Junction, Macassar Retail Centre and the Parow Vallev Centre.

In the half-year to

end December Fairvest was the top performing SA REIT (real estate investment trust) with 25.7% annual total re-

turn to shareholders. Distribution for the period increased by 8.3% to 10.6c/share with the total property portfolio increased 5.1% to R3.14 billion. More importantly, vacancies were contained at 3.5% of total lettable area. At the time Wilder said: "Fairvest's focus on a differentiated sector of the market and its unrelenting drive to excel at propfundamentals, erty have allowed investors to reap the rewards of consistency. Low vacancies and arrears, high tenant retention and solid growth in net property income continue to deliver dis-

tribution growth at the top end of the market."

another In indeveloptriguing ment in the Western Cape property sector, investment company Niveus has sold its portfolio of properties to its controlling shareholder, Hosken Consolidated Investments (HCI).

The deal really involves Niveus selling the Paarl-based properties formerly owned by the old KWV Group, subsequently renamed La Concorde after the liquor assets were sold off. The deal makes sense since Cape Town-based HCI - one of the biggest empowerment companies in SA – already owns a sprawling property portfolio.

noted La Niveus

Concorde did not have the expertise or resources to unlock value in the property assets.

HCI will pay R49 million for the properties. But the terms of the deal state that HCI and La Concorde have agreed that there will be a two month waiting period to determine whether any third parties would submit binding offers to acquire all properties.

HCI has shown considerable acumen in developing properties, having completed the Kings Road and The Point developments in Sea Point as well as the Whale Coast Mall in Hermanus.

Meanwhile Ingenuity, the Western Capefocused property redeveloper and owner. looks like it will go pri-

vate. A consortium of large shareholders intends buying out its minority shareholders in a scheme of arrangement that will see Fairvest delisted from the JSE.

Ingenuity said the

board of directors had

considered what was

in the best interests of

Ingenuity shareholders.

out that Ingenuity had

been listed on the JSE

since 2007, but had not

experienced material

benefits from being in

the listed environment.

Specifically, Fairvest

had not garnered in-

pointed

on the JSE.

Directors

being listed. Ingenuity has been In addition, directors involved in property resaid Ingenuity has been developments stretchunable to generate sufficient shareholder ing from the city centre spread and liquidity. to Tygerberg - but the company never cap-This impeded its ability tured the imagination to raise equity capital in order to fund its deof property investors velopment pipeline.

In an unlisted environment directors believed management of Ingenuity would be able to dedicate more time and resources to the performance of the business of Ingenuity without dedicating time, expenses and resources to regulatory requirements and processes associated with being a listed entity.

Mzuri estate offers innovative design options

MZURI ESTATE in Somerset West is one of the last properties with uncluttered views over False Bay and offers potential buyers an innovative option when purchasing real estate in this luxury residential estate development. Buyers will be able to acquire a freestanding home or townhouse with pre-approved architectural designs to expand their properties at a later stage.

Designed by prominent design firms MB Architects & TC Design, the development offers numerous options in terms of individual needs as well as affordability. This includes 68 singleresidential homes, 32 townhouses and 136 apartments. Buyers can opt for the classic 2-bedroom design with various options for an extension thereof to fit their lifestyle or economic circumstances.

According to lead project manager Alister Human from Lazercor Developments, these flexible design options will allow buyers to grow into their two-bedroom houses and townhouses offer the options to extend carports to garages, to create extra and creative entry points or to add additional bedrooms to the properties. These design plans are included in the initial purchase price and have been pre-approved, which makes future expansions virtually hasslefree. Selling prices starting from R1 195 000 for apartments, R1 895 000 for townhouses and R2 395 000 for freestanding homes adding to the appeal of this residential development in the popular Helderberg area of the Western Cape.

A modern and contemporary architectural language flows through the entire development to maximize north-facing orientations and to capitalize on the view opportunities towards False Bay. Orientating terraces and patios to the north will allow residents to take full advantage of the sun, while offering protection from the southeasterly winds in summer.

For architects Jon Mitchell of M B Architects & Matt Salvensen of T C Design some of the key challenges were to create a sense of space and privacy, while creating an interesting and secure environment with great outdoor lifestyle "The opportunities. development aims to create a great sense of community and social cohesion with communal areas such as a clubhouse, gym, swimming pools, meeting areas, braai facilities as well as running and cy-



cling tracks," explains Mitchell.

The three-bedroom signature show house

unit will be completed in September 2019 and will showcase the high quality, contemporary lifestyle product that future residents can expect from the developers.

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homes. "This is an innovative concept for the local real estate industry, which takes into account the changing requirements of firsttime home owners or growing families. This gives potential buyers the opportunity to purchase real estate within the exclusive environment of the soughtafter Somerset West area. This is a rare opportunity both in terms of investment and value-added proposition,' mentions Human.

The classic off-plan designs for both the

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Infrastructure upgrade at Mzuri benefits larger community

THE first phase of the infrastructure upgrade at the Mzuri residential estate in Somerset West is complete. The upgrade project, took six months, is valued at R25-million and will bring significant improvement to the road network, water, sewage and electricity supplies as well as the stormwater systems.

This week sees the official opening of Summerhill Road, which links the Old Sir Lowry's Pass Village road with Bizweni Avenue. According to Mark Teuchert, managing director of Lazercor Developments, the upgrades will be of benefit to the larger community. "The improved road network will unlock the full potential of the greater property and will allow even better access

for property owners at the estate as well as residential neighbours. The popularity of Cape Town and Somerset West in particular has required that the local government promote the densification of well-located urban land. The City of Cape Town has done a great job in providing regional infrastructure to keep up with the explosive growth in the eastern growth region of Somerset West and as developers we are taking the responsibility to add value to their efforts with this extensive project.'

Aspects of the upgrade included major improvements to the Old Sir Lowry's Pass Road and Reunion Drive intersection and the storm-water system that was designed to comply with the City



New intersection: Pictured at the event (left to right) are Hannes du Plessis (AIM Brokerage), Piet van Blerk (ICE Group), Andre du Preez (DP2 Construction), Alderman Stuart Pringle and Mark Teuchert (Lazercor).

of Cape Town's sustainable urban drainage policies. This was achieved by creating a

bio-retention facility U within the attenuation of pond at the Reunion of Drive intersection.

Using gabions for the construction of the dam wall, allowed for increased capacity

without the loss of developable land.

Located in the Waterkloof catchment area, the pond will also protect downstream residential areas from excessive flood peaks as it will retain up to 95% of the storm-water run-off from Mzuri and the neighbouring residential areas. The bio-retention attenuation pond with extended attenuation also acts as a filter for pollutant removal with a 1,2m thick sand layer. Sub-surface drains in the sand layer slowly drain the filtered water into the municipal storm-water system. Planting of wetland vegetation in the top soil also further assists with the cleaning process of the stormwater. This process is further enhanced by mechanisms such as

vegetation filtration, settling, evaporation, biological and microbiological uptake and soil adsorption.

The Mzuri residential estate will be serviced with very good roads, easy access to the N2 highway, Cape Town International Airport, worldclass wine estates, golf courses, beaches, quality medical facilities, retail centres and schools.

Potential home owners have a choice between modern freestanding homes, townhouses and apartments ranging from R1 195 000, R1 895 000 and R2 395 000 respectively. A well-established industry network assisted in generating pre-approved home loans of between 80% and 100% for qualifying buyers.

R600m retail boost for PE's Boardwalk

FLANAGAN & GERARD Group and Moolman Group have signed an agreement with Emfuleni Resorts, a subsidiary of Sun International, to extend and upgrade the retail area at Boardwalk Casino and Entertainment World, Port Elizabeth, in an exciting R600 million redevelopment project.

Boardwalk Mall will include the latest shopping and leisure trends. Made for locals, the developments will more than double the retail space in the Boardwalk Precinct when it opens in 2021.

MDS Årchitecture is designing the development. Work is planned to commence in early 2020.

Boardwalk Casino Entertainment and World is already one of Port Elizabeth's most prominent landmarks. A short walk from the Blue Flag awarded Hobie Beach, it is a prime tourist location distinguished by exceptional entertainment and attractions, including the only licenced casino in Port Elizabeth and one of only two cinema venues in the city. The precinct currently comprises of a 6 000 m² Boardwalk Casino, 140 key 5-Star Boardwalk Hotel, conference facilities, 11 800 m² of existing retail and a five-screen Nu Metro cinema complex.

Building on this strength, the Boardwalk



Architectural perspectives of the upgraded entrance, food court, piazza areas and internal view of Boardwalk Mall.

Precinct's retail component will increase to 26 000 m². In addition, the project includes a substantial upgrade and reconfiguration. It will amplify leisure and retail options by integrating more shops, restaurants, family fun and the spectacular new Sun Park Square designed to host major events. Anthony Leeming,

CEO of Sun International says, "We are delighted that the Boardwalk mall development is back on track. When it is complete, the new and expanded mall will com-

plement the Boardwalk's other leisure offerings, and further serve the needs of surrounding communities. We view the new mall to be an essential component of the broader Boardwalk precinct, which was identified and earmarked by the Nelson Mandela Bay Metro as an important growth node. We are confident that it will accelerate the Metro's economic growth, job creation and increased returns to the Province." Paul Gerard, MD of Flanagan & Gerard, says, "This is a scarce, strategic and exciting development opportunity in the present South African retail real estate market. We are thrilled to be working with visionary partners of the calibre of Emfuleni Resorts and Moolman Group to create the magnificent Boardwalk Mall. Niched within Port Elizabeth's vibrant retail landscape, Boardwalk Mall will be the ultimate convenience shopping experience."

Pieter Lombaard, CEO of Moolman Group, says, "For some time now, there has been a recognised need to reposition Boardwalk's retail offering to meet the needs of its immediate consumer. Specialist research undertaken by Fernridge strongly supports this development."

With 17 ha of land available for the redevelopment, Boardwalk Mall is only the first phase. There are plans to add even more variety in future, which could include additional hospitality, medical suites, big-box retail and a health club.

As part of the development, R11 million will be invested in upgrading surrounding roads. Second Avenue will be widened into four lanes, and it will include a new entrance into Boardwalk Mall, with another on Marine Drive. The Boardwalk Mall project will also boost local employment and opportunities. A development of this kind typically creates about 3 100 jobs during construction and roughly 1 000 permanent posts thereafter. In keeping with the team's commitment to economic development, local contractors and materials will be used wherever possible. The developers will work with a local community liaison officer to ensure optimal positive impact.

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FM – the six degrees of separation from Eskom

Edward Hector, managing director of SFI, laments maintenance cut-backs, poor quality management and lack of skills.

MANY of you will have come across the term six degrees of separation, a term which is used to suggest that all people are six steps or less away from a social connection from someone else. If not, it makes for interesting reading.

Giving the current status of Eskom I am inclines to suggest that many properties are very close to an Eskom, hence my title.

In a recent presentation, I suggested that the biggest challenge for South Africa is inequality and suggest that we could use our expertise as Facilities Managers to close the gap inequality in the built environment. The reality is that most professionals are involved in industry bodies that operate at the prestigious end of the built environment. By way of example, the Green Buildings Council has rated only about 400 properties in South Africa while really battling to even collaborate with the Public Works Department that manages over 90 000 sites in South Africa.

In respect of the title probably most commercial properties are six degrees of separation of an Eskom that from an AAA graded building in Sandton, Umhlanga or Century City owned by a Listed Fund. The few properties that have hit the headlines are only the tip of the iceberg of poorly managed and non-compliant buildings. In August 2018 a fire that broke out in the

Sauer Street building housing the Department of Health prompted the Johannesburg Attorney's Association to write an open letter to the Department of Public Works to complain about the conditions of buildings housing the courts.

So why the Eskom analogy? Well, it has been firmly established that rolling blackouts can largely be ascribed to the 2. decrease and diversion of maintenance budgets. As recently as a month ago, the COO of Eskom, Jan Oberholzer was quoted as saying "Eighteen months ago, Eskom inexplicably stopped a crucial boiler tube maintenance programme - and it is this that has played a huge role in the current round of load-shedding". This is just one of example where a critical service provided by an outside expert was allowed to lapse. We react with shock wondering how Eskom can make such poor decisions considering the consequences to the national grid.

However, being involved in Facilities Management (FM) in the built environment for over 15 years I can attest to the fact that maintenance, a core function of FM is poorly executed in the majority of commercial and state owned properties in South Africa today. There are many reasons for this:

1. Deferred maintenance is not easily seen immediately but as in the case of

Eskom it catches up with you in a bad way. Often maintenance cuts are viewed as savings to a budget but it is not, it is merely deferred. In a large portfolio, when the cost becomes too high the value is written down and the building can be sold, passing on the problem to the next owner.

The built environment is lacking skills in FM. A senior FM to manage a large property requires at least 10 years' experience across multiple disciplines such as structural, mechanical and electrical. Because of the lack of experience there is a lack of understanding of life cycle of assets and consequently poor decisions are taken in relation to maintenance of these

3. A third reason is poor contracting. There is a disconnect between what procurement write in document and what FM's require on the ground and open tenders become difficult to evaluate. Particularly in technical disciplines, tender documents are high on legal, contractual and transformation wording but low on technical deliverable and KPI's that are measurable. Many documents today go out with little or no

asset registers where

there are the primary determinants of cost. In specialised disciplines, there is little pre-screening or pre-qualification of companies with open tenders being advertised and award often going to the lowest bidder. It is obvious in the case of Eskom that the boiler tube inspections and maintenance is a highly specialised function with a small group of competent companies able to undertake this

Even once awarded, the contract documents are poorly written where metrics of management are not clearly defined and the client does not manage the service provider effectively. This often results in a poor working relationship with the parties talking past each other.

function.

There are many examples of private sector, listed fund and SOE properties where maintenance is six degrees of separation from an Eskom scenario. Of course when these failures happen they are not as dramatic as to course rolling blackouts but they do have a serious impact on the total cost of ownership. These issues around non-compliance with SANS10142 not only have a financial implication but put many lives at risk.

One would assume that more property owners would turn to outsourcing as the solu-



Edward Hector.

tion but the growth in outsourcing or the rating of Green Buildings is relatively poor. This is often because people do not understand the value of outsourcing and even SOE's and large institutions such as Universities vacillate between outsourcing and insourcing.

It is understood that in the case of Eskom funds were diverted and no longer available for maintenance critical but in many other cases the funds are available but the skills are lacking in the appropriation of these funds. The outsourcing market has evolved in South Africa where there are a group of companies able to deliver because they have the core competencies to do so. A key failure in outsourcing today is the client's inability to clearly define and understand the strategic and tactical value of outsourcing and not view cost as a key driver. Too often a comment is make about a cost of a service being

higher now that it is outsourced - however, cost and benefit are not synonymous - one needs to understand what the real benefit is extracted from

The issue of proper budgeting, getting the right skills on board, contracting with the correct service providers downstream and even dealing with transformation can all be better served through an outsourced model where companies are battling internally.

I recall a slogan used over 15 years ago in the FM organization from the basement to the boardroom. To address the *inequality* of the way properties are managed and maintained in the built environment the slogan remains as relevant today. Work harder to get your voice heard, respond to failing infrastructure, challenge both government and the private sector to do a better job – we do not like the six degrees of separation from an Eskom scenario.

outsourcing.

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Victoria Wharf is SA's greenest shopping centre!

Green Building Council SA awards the centre a 5 Star Green Star – Existing Building Performance v1 rating

THE V&A Waterfront's far reaching waste management and recycling practices has earned the property a prestigious Green Buildings Council of SA (GBCSA) 5 Star Green Star Existing Building Performance v1 certification (EBP v1) for the popular Victoria Wharf Shopping Centre - the highest rating for anv existing shopping centre in South Africa. The Shopping Centre, situated in the heart of the V&A Waterfront, attracts almost 24 million visitors per annum, making it the country's most visited destination. The Shopping Centre previously achieved a 4 Star Existing Building award in 2015. To retain the new 5 Star rating, it will have to show that its operations and maintenance consistently achieve the same high standard over a threeyear period. Existing buildings are

rated according to an Existing Building Performance (EBP) measurement tool. The environmental categories used by the GBCSA to assess existing buildings and new buildings are the same, but the focus for an existing building is on ensuring that its ongoing operations and management are efficient. The EBP tool is therefore only available as an as-built rating. The Victoria Wharf Shopping Centre was first constructed in 1992, and has since been extended several times to 88,647 m2. Improving the rating required significant effort from the Waterfront's operations team and the tenants. The Victoria Wharf complex houses over 450 retail outlets and over 80 eateries, has five undercover parking garages and four open parking

Items such as ener-

areas.

gy and water monitoring, and management policies and plans are required in order to achieve the 5 Star rating. The EBP measurement tool also addresses the relationship between landlord and tenants, setting up a win-win situation with the Green Lease toolkit. According to Petro

Victoria Wharf sustainable features

The categories according to which the Victoria Wharf was rated are management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovations. Stand-out sustainable building feabus system

- The V&A property has cycle facilities, including dedicated lanes and bicycle storage right next to buildings
- The V&A uses paints, flooring, adhesives and sealants without toxic emissions. Tenants are encouraged to do

Waste Recovery and **Recycling Centre:**

While incentivising tenants to recycle, the V&A Waterfront also ensures the property keeps pace with global plastic recycling best practice. Since January 2018 the

Waste Recovery and Recycling Centre has sorted waste from 384 daily col-

Myburgh, Operations Manager at the V&A Waterfront: "we have done a lot to decrease our water consumption since our 2015 4 Star rating. We have further improved our waste management systems implemented a and Wildlife Management Programme. With the 4 Star rating

we committed to implementing the Green Lease toolkit and we now have just below a quarter of our tenants signed. This is quite an achievement given the size and complexity of the area."

tures noted by the GBC-SA include:

- Excellent recycling initiatives, incentives for tenants to recycle and an on-site waste handling facility
- Skylights throughout the Wharf provide a large amount of natural light, saving on energy
- Energy efficient LED lighting has been installed throughout the common areas
- The building has access to public transport facilities, most notably the MyCiti

- the same
- All taps and toilets are water efficient, while the roll-out of hand sanitiser also assists with water saving
- · Green Cleaning' practices are applied in the building
- Construction materials with a low environmental impact receive preference
- There is an operational drive to eliminate single-use plastics from the Shopping Centre

- lection points (including wet waste) on-site, essentially clearing 550 bins twice a day.
- To date, the Waste Recovery and Recycling Centre's successes include:
- Between 1 January 2018 and 31 May 2019, the V&A Waterfront diverted 3 200 tons of waste created on the property from going to landfill.
- Created an additional 44 direct jobs related to waste management.
- for further product, technical information & technical assistance

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Flowrox makes filtration process easy-to-read

LIKE many other filtration plants, Terrafame's filter operators faced a common problem: data about tower press filters' performance was only accessible on the screens mounted on individual filters. "Before, the information about filtration process was hard to access and read. I didn't have the time to try and get through big amount of data. There are three tower press filters operating in the zinc production and I could only see what the overall production rate was. Now, with Flowrox Smart Filtration Digital Service, I can open my laptop in the morning and from one screen instantly see, how the filtration process is going. Within a couple of minutes, I know what is happening: what is the utilization rate, productivity, cake weight, waiting times, average cycle du-



Flowrox Smart Filtration Digital Service is a turnkey solution and is completely safe.

ration, and so on," explains Juha Paavilainen, Process Engineer at Terrafame, Finnish multi-metal company producing nickel, zinc, cobalt and copper.

Terrafame's Filtration Process Improvements

The three tower press filters in Terrafame's process are of the same size and model. From the technical point of view, they should perform in nearly the same way. Flowrox analysis has shown this is not the case. One of the filters had an extremely high pressure peak, which could result in premature breaking of diaphragms. "I did not know the pressure peak was that high. This was an important find because if diaphragms break too soon, we face more downtime and higher costs," confirms Paavilainen.

Flowrox Brings Significant Savings

With this valuable inprovided formation. by Flowrox filtration specialists, Terrafame can now detect minor issues and use the data to prevent major failures. "We can remotely observe the filtration process and also get alarms if some values exceed the normal situation. Through the real-time view, Flowrox can support the customer and help optimize the filtration process. The filtration specialists can remotely find malfunctions and advise how to eliminate them," adds Simo Rounela, Application Manager, Smart Solutions at Flowrox.

Putting a spin on cleaner oil

The highest performing and only self-monitoring bypass oil separators in the world - IOW Group brings to the market a new disc stack centrifuge spinner that it claims is the most efficient in the world.

UK based IOW Group is an international manufacturing company providing some of the most advanced oil separation solutions available in the market, some of which were on display at the recent PowerGen Africa 2019 trade show.

Designed from extensive knowledge gained from the large purifier market, the self-powered oil separators use oil pressure to create rotations and have been welcomed to the market by many customers in the power generation and marine markets where oil cleanliness is a key factor in reducing maintenance and service intervals of critical equipment.

It is common knowledge that the primary filters, allow certain sized contaminates. generally 20-25 microns, to pass through. These are predominantly soot particles (a by-product of combustion in diesel engines) which shorten the life of the lubricating oil and cause damage to engine parts as they are very abrasive. The primary filters could be made to take these particles out, but this would mean massive increases in the size and expense of the filters. With the advent of emission controls and exhaust gas recirculation in modern diesel

engines, there has been a substantial increase in the amount of soot being deposited into the engine's sump. The problems associ-

ated with contaminat-



ed lubricating oil have been well documented, and the benefit of its removal, to both engine and oil life, is well known, but this is not restricted to diesel engines alone and gas burning engines too suffer from abrasive particles, a by-product of the fuel, which have implications similar for the oil and engine. Larger installations have long had separation systems installed alongside them, but these machines are both expensive to purchase and at times are technically challenging to run. This has meant that for smaller engines it has not been economically viable to have an independent separation system installed.

IOW Group separators clean oil using centrifugal force 2 000 times greater than gravity. They are powered simply by the oil pressure from the engine or application, with accelerator channels and nozzles harnessing the energy that is flowing into the centrifuge bowl creating rotational

particle flow of up to

oil exits the bowl to return to the application with the dirt and particulate remaining in the bowl to be cleaned when full. Other suitable include: applications trains, trucks, buses, fixed and mobile mining equipment, gearboxes and anywhere where cleaner oil would be beneficial.

8000r/min. The cleaned

The MP Centrifugal Separator products, have many advantages over existing competition, including; bowl disc technology, Bluetooth remote monitoring system, a fully sealed design and a distributor impeller. These attributes mean higher speeds, more efficiency and greater functionality than the current market leaders and can lead to operational cost savings and a return on investment typically less than 1 year.

Customers have recently seen increases in oil and filter life from 700 to 1 500 hours, saving substantial amounts of money annually.

For more information visit the website www. iowgroup.com

Filteg open in Cape Town

FILTEG Solutions, a leading supplier of filtration and separation equipment to South African industry for over 25 years, has now established a branch in Cape Town in order to more effectively service both the Eastern and Western Cape territories and clients in the area. Filteg's combination of skills, versatility, vast range of filtration experience and top quality equipment differentiates it from others in the field.

service a Filteg broad range of clients involved in many sectors of the economy,



Mr. Arnold van Wyk, heading up Filteg in Cape region.

including the mining sector, petro chemical industry, steel industry, pulp and paper industry, automotive and paint industries, food & beverage industry amongst others. Its diverse range of filtra-

tion, separation and classification equipment is sourced from both highly reputable and experienced local

as well as overseas suppliers, enabling Filteg to meet virtually any filtration or separation

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FLOORING & HANDRAILINGS

German research produces ultrasustainable plastic flooring

WINEO PURLINE, a new ultra-sustainable and organic type of plastic commercial flooring which has been developed in Germany is now available in South Africa.

KBAC Flooring stocks the resilient German flooring made from safe renewable and natural raw materials to replace the petrochemical raw materials in flooring. Wineo Purline has as main component a high-persustainable formance, bio-based polyurethane based on a new element known as "Ecuran". This unique material is derived mainly from plant-based oils such as canola or castor oil and naturally-occurring mineral components such as chalk.

Bio-polyurethane, one of the highest quality plastics in the world, is versatile, resistant to wear and solvents, chemicals and weather effects. It is commonly used in, for example, the automotive and furniture industry, the health care sector and for sports equipment and adds unprecedented durable qualities to a flooring product.

Wineo Purline is totally free of odours, chlorine, solvents, or plasticisers and has already received seven internationally-recognised design awards including GREENGUARD Gold Certification and the world-renowned "Cradle to Cradle" certification.

An ideal choice for healthcare and hightraffic settings, the collection is claimed to be five times more durable than vinyl flooring products, with maximum hygiene ensured by a nonporous polyurethane top surface. This is a vital feature for installation in health care centres and hospitals and also required by the hospitality sector as well as educational institutions or any facility subjected to high foot traffic. Wineo Purline is resistant to stains and scratching, retains its stability under heavy weights and has excellent recovery capacity after load removal. Due to its tightly closed and wear-resistant polyurethane top layer and the entire product's structure, Wineo Purline in glued format is ideal for damp rooms such as kitchens and bathrooms. The new flooring is available in three formats: rolls, planks and tiles and over 120 naturally-inspired colours with authentic wood and stone looks.

CREATING tiles is an exercise in constant innovation, and with Ceramic Industries its newly developed ink and glaze special effects make use of novel technology to create eye-catching finishes that put tiles at the

forefront of fashion. Some of these new applications have been

Tech drives fashion forward

developed in collaboration with international partners, and use technology that's unique to South Africa. Spain's Ceramitec worked with Ceramic Industries to develop the Stardust effect, which is already creating excitement at trade shows. The partners formu-

lated innovative glue,

which is applied with coloured granules that melt to form an attractive, fine crystalline finish.

Ceramic Industries' SAMCA Wall factory is applying Stardust to various tiles in their range, and using it in combination with matt and satin finishes. The Lumina effect

is featured on some new ranges from both the SAMCA Wall and Floor factories. It's achieved by applying a lustrous, pearly type of ink to the ceramic to highlight or embellish selected details. It's also ideal for imitating the worn effect of aged cement and terracotta tiles.

Some Ceramic Industries factories are now able to apply an affondante effect (Italian for 'sinking') using a special ink that creates precise indentations where applied. Several tiles use the Chisel and Deep Etch effects to create texture, or to outline a design pattern for greater emphasis. Among the new effects the Gryphon factory has developed is Nebula, which was designed to create glossy areas on selected regions of the surface. The manufacturer has used it to good effect in their hardwood recreations, where it brings wood-grain to life.



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Our original, fashionable finishes are made possible by science. Ceramic Industries is constantly developing new glazes, reactive inks and innovative processes - all to bring our customers the most stylish designs science can offer.

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Glueless floor covering

THE Polysafe Quick-Lay PUR Collection is the latest offering to be launched in South Africa by Polyflor SA, specialists in vinyl flooring and wall protection solutions.

Adhesive-free, easy to install and slip resistant

Polysafe QuickLay is a loose lay safety flooring designed for adhesivefree installation and is the perfect solution for busy commercial environments in need of a quick turnaround and where sustainable slip resistance is a priority. According to Tandy Coleman, CEO of Polyflor SA, Polysafe QuickLay can be used as a temporary or permanent floor covering and achieves the same performance and durability as other Polysafe flooring collections, but with the added benefit of being adhesive-free.

"This is a very practical choice for contractors and specifiers alike and was developed by Polyflor in response to a growing need for loose lay flooring solutions that would save installation time, eliminate the need for adhesives and make future replacement easier, yet still offer sustainable slip resistance required from a safety floor," she says.

Vinyl floors that can be installed on newly laid concrete floors

When installing Quick-Lay, subfloor preparation is considerably reduced as it can be laid directly over a variety of existing floor coverings, including new concrete substrates of up to 97% RH. The specially studded formulated Studded Emboss works as a bar-



rier and allows moisture to escape from the subfloor. The QuickLay system simply works by applying the specially designed QuickLay tape provided around the perimeter of the room, underneath seams and doorways, securing the flooring in place. After thermal welding the installation is suitable for immediate traffic. (As an added value offer, Polyflor is supplying 2 rolls (25 linear metres each) of QuickLay Tape free of charge with each full roll of QuickLay purchased, ensuring there is enough tape supplied as standard, to fit almost all installations! If necessary, further tape can be purchased at an additional

cost.) The adhesive-free installation also promotes excellent indoor air quality and low VOC emissions, which leaves a healthy environment that can be used straight away.

Dementia friendly

The Polysafe Quicklay PUR Collection is available in a tonal colour bank of 12 contemporary shades with a matt surface finish, making it suitable for dementia friendly environments. The University of Stirling's Dementia Services Development Centre

(DSDC) – a UK-based international centre of knowledge and expertise dedicated to improving the lives of people living with dementia - has accredited the full collection with its plain and tonal decoration.

Conclusion

Suitable for use in heavy commercial and residential environments in need of a quick turnaround and where sustainable slip resistance is a priority, the Polysafe QuickLay features the exclusive Polysafe PUR reinforcement for optimum appearance retention and superior cleaning benefits.

It can be used in commercial, residential and educational areas (front or back of house) and is ideal for circulation and heavy traffic areas where there are risks of water spillage and other contaminants, such as corridors, dining areas and cafes, classrooms, hospital wards, clinics, laundry and sluice rooms, nursing homes, washrooms, WCs, bar serveries, food preparation areas, kitchens and

canteens. It conforms to EN 13845 and 50 000 cycles abrasion test and sustainable wet slip resistance is assured throughout the guaranteed life of the product.

THE Flooring Industry Training Association (FITA) is the official facilitator of accredited training for all flooring installers. The association was established in 2013 to address the desperate need for new skilled artisans in the flooring industry as well as new legislation regarding the training and registration of artisans. FITA maintains a national register of installers and their qualifications and its goal is to develop this database.

Jenny Panayiotou, Communications Manager at FITA, comments: "FITA has been working closely with the Construction Education and Training Authority (CETA) to improve skills, create career paths and increase employment in the sector. Our collaboration with the CETA is to align the training of installers and artisans in the flooring sector with that of the rest of the world."

FITA has earmarked 13 types of flooring applications that will each receive its own specific curriculum in a qualification that has been scoped and is with the Quality Council for Trades and Occupations for registration.

Each curriculum comprises theory, practical experience and work experience, and learners will be taught and assisted by CETA approved training providers in a classroom setting.

Short skills courses run for varying lengths of time and installers can do these as when required, to earn credits. A full learnership, which FITA currently hosts for brand new installers, is four months of theory and eight months of practical training. Cad4ALL in Cape Town is a FITA service provider who recently started a learnership for 50 unemployed youths.

The costs of the learnership are funded by Discretionary Grants from CETA and the host companies bear no financial responsibility for the learners. FITA covers them through the Compensation for Occupational Injuries and Diseases Act (COIDA) and the grant allows for a stipend of R2 500 per person per month.

"Flooring installations have become increasingly complex and installers are expected to know how to install everything from vinyl to tiles and rubber. Without proper training and accreditation, this task will simply remain a 'job' that is done without quality control and precision. We want to develop

installers so that they see their roles as career paths with varying levels of qualifications and prospects," says Jenny.

Creating business and entrepreneurial opportunities

FITA is focusing on facilitating the training of tradespeople who are both new to the industry as well as experienced in the flooring sector.

"Flooring systems on the market continue to change, and older flooring experts aren't always eager to part ways with the old way of doing things. Staying up to date with the latest installation methods will ensure your business stays relevant into the future. Our training is for new tradespeople and experienced installers

alike," says Jenny. FITA recognises prior learning and has a procedure where more experienced workers who have not been formally trained can be assessed. FITA's goal is to create a comprehensive network of courses, trainers and tools so that every person who wants to install flooring has the opportunity to do so. Access to the correct information, upskilling opportunities, workshops and training are some of the ways that they plan on achieving this goal.

Mitigating costs of poor installations

Jenny says that it is important for architects to know that they can specify that only an accredited installer be used for a job. FITA has issued installers with cards, indicating their designation and skills set.

"By insisting that only FITA installers can apply their products, manufacturers can mitigate the costs and negative impact of substandard flooring installations. Our training, services and tools means there is no longer a reason to accept poor workmanship," adds Jenny.

What type of accreditation can and installer apply for?

If you have this much experience	you can apply for this title	in two of these floor types
1 year	Assistant Installer (NQF2)	Artificial grass, Bamboo, Carpet, Ceramics
		Glass and Stone, Cork, Laminate,
3 years	Installer (NQF3)	Linoleum, Raised Access, Real Wood,
_		Resin, Rubber, Seamless, Vinyl, Wet Pour
5 years	Head Istaller (NQF4)	Rubber
Mana than 10 and		
More than 10 years	Master Installer (NQF4)	



A flooring masterpiece

Upskilling flooring contractors

New showroom situated at: Adam House, Orion road, Nerissa Estate, Lansdowne, Cape Town REVELSTONE is a benefits to visiting the supplier of traditional Revelstone: and engineered paving stones, patio slabs, cladding, tiles and coping whose superior finishes are suitable for interior and exterior projects; cladding for your outdoor braai or patio, or a striking feature wall in an entertainment area. Revelstone has the resources to help create the vivisions to life. sion of a beautiful live-**Ideas and inspiration** able space, inside and outside a home.

There are many

ny The showroom is burst-

ing with innovative designs and products.

Expert Advice. Free quotations whileyou-wait

The Revelstone sales team boast over 10 years of experience, and have offered insight into many professional projects over the years. Mike, Melanie and Audrey are on hand to bring ideas and

When visiting the Revelstone showroom, a complementary factory tour is offered conducted by knowledgeable staff members, allowing insight into the products manufacturing techniques.

Boardroom and coffee shop facilities variable.

Revelstone clients - including architects, landscapers, interior designers and private clients can take advantage of the showroom and boardroom facilities to finalise or discuss plans, or designs to meet their client's requirements.

Embedded safety solutions

AFROX compressed gases that use mixtures of argon, helium, CO, and oxygen are widely used for welding processes such as gas metal arc (GMAW), gas tungsten arc (GTAW) and flux cored arc welding (FCAW). In addition, Afrox's fuel gases, oxygen, acetylene and compressed natural gas, are typically used for gas welding, cutting, heating, straightening, and descaling. Modern plasma and laser cutting machines also use a range of gases to achieve the cut speeds and qualities required.

"While the equipment used is generally well understood by industry, sometimes people forget about the dangers. Many people are injured each year by the incorrect or careless use of oxy/ fuel gas equipment, for example," notes Afrox's Johann Pieterse.

Potential hazards include: fire caused by heat, sparks, molten metal or direct contact with the flame; explosions when cutting or repairing tanks or drums that may have contained flammable materials; fire or explosion caused by gas leaks and flashbacks from the welding or cutting gases being used; fumes created during welding or cutting; fires resulting from leaks or misuse of oxygen;

burns from contact with the flame or hot metal; and impact injuries from handling and transporting cylinders.

Years of experience at Afrox has resulted in the introduction of the Afrox Safety Solutions Programme (SSP). "SSP is an integral part of our 360-degree Solutions initiative, which strives to take a holistic view of a customer's operation, which includes the onsite conditions and hazards; the equipment choices, conformance and condition; as well as employee skills and knowledge," says Pieterse. "Safety should be

about much more than just training," continues Pieterse. "SSP ensures customers follow the safest and most efficient operating procedures for their equipment. We support customers with detailed site and equipment surveys, followed by a detailed report that assists in rectifying the findings – and this can embrace safety as well as fabrication efficiency issues.

"Skills audits are part of this survey process and, once done, training needs are identified, which can be done by Afrox either onsite or in one of its training schools - and our customer's employees all receive Chieta accredited training," Pieterse assures. Pieterse highlights a recent SSP implementation as a result of a shortage of dissolved acetylene. "We were asked to assist a customer to convert from oxy/ acetylene to LPG and to recommend the correct equipment for the new process," Pieterse relates. "Then we established a safe working environment to use the new gas, which presents different characteristics and safety risks. Finally, we retrained the staff in

the safe operation and

effective use of the new processes."

Summarising the key the objectives of SSP, he says promoting the safe use of welding and cutting gases and related equipment is the central goal. "At the starting point is to ensure that the required equipment is fit for purpose and that it conforms to industry norms and standards,' he says.

From a training perspective, it is vital that the operator has a sound understanding and knowledge of how to use gas welding and cutting equipment safely and, while applying safety requirements, that the surrounding environment is also kept safe for other employees in the immediate vicinity.

"With SSP embedded, Afrox is extending its 360-degree capability to customers across South Africa, identifying opportunities to implement complete quality solutions that are safe and efficient, while providing full back-up and support," concludes Pieterse.

Complete safe, welding solutions

UNIQUE WELDING ALLOYS (UWA) has taken a bold new direction to provide the welder with the required knowledge and information to become more productive and produce quality welds. Welder safety is also critically important given that welding fumes are now classified as carcinogenic by the British health and safety authorities.

UWA is a fully-integrated gas and welding solutions provider offering best value-formoney welding equipconsumables ment. training installation, and post-sales service. Human-Machine Its Interface (HMI) concept allows better 'communication' between the machine and user via prominent advise information labels and charts detailing parameters such as gas selection according to steel type, spare parts details and consumables lists. The Zeus Plasma range for example is equipped with dials guiding the user on what current, air pressure and steel thickness should be used to get the optimal cut.

Reduced policing by the SABS has allowed large-scale imports of low quality and noncompliant gas equipment by distributors. Most such imported products claim to n standards such as ISO 2503:1998 when the products clearly do not meet the standard as laid out by SANS 10238. In order to obtain the ISO 2503 compliance, a regulator must have passed the Oxygen Ignition tests which are only performed by two European companies namely BAM and Apragas as well as selected accredited American institutions. Instead of importing regulators that falsely claim to meet these standards, UWA chooses to partner with companies like Victor, to provide customers with 100% certified EDGE Regulators which are among the most advanced in the world. Customers should request a supplier who claims compliance to EN2503 to produce the relevant Ignition test certificates. Responding to new scientific evidence proving that exposure to welding fumes can cause lung cancer and possibly kidney cancer, UWA has not only embarked on a media campaign to highlight these developments and better serve its customers

tory (PAPR) systems. The Thermamax TruFlow PAPR System purifies the surrounding air and delivers clean, breathable air for up to nine uninterrupted hours. The system is equipped with an 8-speed flow-controlled respirator and a 4-cell Li-Ion battery pack. It is a lightweight system that straps onto the welder comfortably, and is armed with a triplealarm system to notify the user of any dangers or blockages.

At the forefront of this PAPR technology is the use of advanced air filters. Many people but is offering the latest are unaware that they need to use different innovation in Powered Air Purifying Respirafilters according to the

different metals that are being welded. This is because different metals emit different fumes – and using the incorrect filter renders the PAPR system ineffective. Stainless steel, for example, lets off an extremely hazardous gas called Chromium VI, which is one of the primary fumes associated with the recent cancer findings. When welding stainless steel, a particulate filter must be used.

The British designed, Thermamax TruFlow PAPR System is currently being used by some of the most safetyconscious corporations in South Africa, with great success.



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Trust in performance

Cranes for Prieska pre-cast



Typical Condra portal crane.

AN order has been Wilson placed by Bayly Holmes-Ovcon (WBHO) for four 32-32 ton portal cranes to manage materials handling at its new Copperton and Garob Wind Tower pre-cast yard in Northern Cape.

To be delivered to Prieska before the end of September, the order brings to six the number of these giant machines that will have been delivered by Johannesburg headquartered Condra for pre-cast work in the last nine months, and to eight the total number of gantry cranes manufactured by the company over the past year.

Portal cranes for precast yards are purposebuilt to lift, position, stack and load reinforced concrete components. Two have been at work for another customer in Nelson Mandela Bay since late last year, when they were commissioned

at a yard supplying concrete bases and columns to coastal wind farms.

The four machines for WBHO's Prieska yard will help produce similar components, in this case keystones each 20m in length that will be used to erect the 100m high reinforced concrete wind towers at the Copperton and Garob wind farms near Copperton.

The two farms will together generate some 140MW of electricity (573 GWh per annum) after completion in mid-2021.

Commenting on the WBHO order, Condra's managing director Marc Kleiner said "We have been supplying cranes to this customer since the 1990s, and all our machines have delivered sterling service". Kleiner added that the WBHO machine specification had been influenced by the performance of the vrability along yard rails two Class 3 M6 Con-

dra machines commissioned in Nelson Mandela Bay last year for a second customer of the type. WBHO was able to observe the performance of these cranes before ordering its own machines, which will be similar but designed to Class 2m M5 standard.

Two of the cranes will be delivered in August after a relatively short lead time of twelve weeks, and two in September.

Each of the four identical, 28,5m-span cranes will feature two 32-ton hoists delivering lifting speeds of 3m/min over lifting heights of 9,09m, allowing pre-cast components to be simultaneously and precisely lifted at two points to minimise stress on the loads. Cross-travel and long-travel speeds will be 20m/min and 60m/ min respectively, allowing quick crane manoeu375m in length.

The long-travel speed of 60m/min is approximately twice the standard for long-travel, and Kleiner explained that portal crane speeds for lifting, long-travel and cross-travel vary according to the key points of productivity within each application.

The pre-sink portal cranes that we manufactured for new mines in Asia and Limpopo Province were digging machines with fast lifting speeds of one metre per second for maximised rates of earth removal," he explained. "By con-trast, productivity at Prieska will depend on the same speed applied to the long-travel to quickly traverse the yard, with the lifting part of the operation being carried out at a more delicate 3m/min because of the need to avoid excessive stress on the loads." WBHO's

Prieska machines will be physically very large, each standing over 11 metres tall on 8,65-metre end-carriages, and spanning 28,5 metres between rails. To facilitate installation, the end-carriage legs will be hinged where they join the gantry, allowing each machine to be assembled spread-eagled on the ground, with the legs descending into the vertical position as the assembled, spread-eagled machine is hoisted into position.

The hinged legs will cut conventional crane installation time bv about one half.

Large lifts saves time and money



Upfront engineering on a tandem bridge lift by Johnson Crane Hire saw the lifting project successfully completed.

"TAKING advantage of today's advanced lifting and moving technology needs a thorough assessment of lifting options, and this needs to be done as early in the project life cycle as possible," says Johnson Crane Hire national sales executive Peter Yaman. "For this reason, Johnson Crane Hire offers customers our 'upfront engineering' service to fully explore which solution will be safest, quickest and most cost effective for the specific project."

He notes that South Africa did not historically have much capacity to deal with abnormally wide, high or heavy items, and many of the country's road routes were not con-

ducive to transporting them.

"Our whole construction methodology was therefore aimed at much smaller components, which could be more easily transported, and then lifted by smaller cranes," he says. "The downside, of course, is that the 'stickbuild' required on site brought a range of risks and costs. Working at height is always hazardous, for example, and assembly on site generally takes much longer than in a purpose-designed manufacturing

facility." Yaman notes that it is usually preferable to build an engineered structure or component in a factory environment where manufacturing conditions are more controlled. Here, there are better quality controls, and testing can be conducted before the item leaves the facility for site.

"This is generally a lower risk option than fabricating the item on site, especially where factors like adverse weather conditions, limited availability of specialised equipment and working at height can make the process more challenging," he says.

Yaman highlights some of the alternative technologies that can be brought into play when project options are examined at an early stage. In a recent proposal, the company was able to apply jacking and sliding techniques to moving 3 000 ton concrete units. The sheer weight and size of the units made normal lifting by large mobile cranes impractical but lent itself to the use of a jack-and-slide method to get the loads from the casting area to the location where they were to be installed.

"This was only one element of the solution, however, as gantry systems and strand jacking could then be considered for the lifting requirements of these structures during installation," he says. "A key benefit of alternative systems like iack-and-slide or strand jacking is their modularity. This means their capacity can be cumulatively increased to match the demands of the items to be moved or lifted." The same applies to self-propelled modular trailers (SPMTs), where almost any combination of axle lines can be built into a trailer configuration to suit the load. This suits very long loads, allowing extra axles to be added to extend the trailer's lifting stability and transporting capacity.



HEAVY LIFTING

Expanding order books in Europe and South America

CONDRA's subsidiaries in Bulgaria and Chile have secured orders for five cranes in recent weeks, with applications ranging from hydroelectric turbine maintenance to furnace management duty.

Manufacture of the first machine, a 70/10ton double-girder electric overhead travelling highlift crane for a hydroelectric power station in Chile, began mid-April, with production of three further cranes just beginning. Production of the fifth order, only just received, has yet to be scheduled.

Condra's authorised distributor in Chile, Mantex, took the order for the 70/10-ton highlift machine. Valued at 200 000 US dollars, the crane will be used for hydroelectric turbine maintenance after delivery to customer Besalco, a construction and energy concern. Manufacture is taking place at Condra's Johannesburg factory for shipping at the end of June, while Mantex is preparing to oversee installation and commissioning the following month.

The crane features dual operating levels (16,7 metres on the 70ton main lift and 7,8 metres on the 10-ton auxiliary lift), frequency drives throughout the long- and cross-travels and both hoists, full-length walkways, a ramshorn bottom block on the main lift, a stairwell and the option of control by pendant or radio remote.

Remarkably, the entire machine will ship in a single 12-metre container owing to an innovative crab design that allocates individual frames to each of the main and auxiliary hoists, instead of mounting both atop a single crab frame. With the two crabs pinned together to form a train, the overall dimensions of the main hoist will be sufficiently reduced to enable all components of the dissembled crane to fit into a single container, with the girders packed on their sides and the two crab units inserted above



Three Condra overhead cranes installed in a Bulgarian fabrication plant. Condra Bulgarian subsidiary has in recent weeks taken orders for four similar machines.

and end-carriages will

be manufactured at

Condra's main works in

Johannesburg, while the

steel structures, crane

electrification, installa-

tion and service will be

provided by the Bulgar-

ian works in the city of

vantages becomes better

known across this Euro-

pean region.

The recent successes

Gabrovo.

company Metal Group Elite.

There are heat shields on the bottom blocks and motors of the Metal Group cranes to allow operation within the furnace environment.

Spans of the three cranes range between 11 and 13,8 metres.

An order for a fourth crane, a 10-ton unit for an undisclosed customer, was received in early April, while an order for a further fifth crane is anticipated soon. Manufacture of these

Manufacture of these cranes is to be divided between Bulgaria and South Africa. Hoists THERE are now a dozen more renewable energy projects underway in South Africa, which together will need construction of 465 wind turbines during the construction phase of Bid Window 4 of the Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).

According to Johnson Renew general Cornelis manager Grotius, the experienced specialist lifter is geared up to move these projects along to safe and timeous completion. He confirms that it has already secured crane services contracts at four wind farm projects, namely Golden Valley in the Eastern Cape, Excelsior in the Western Cape, Kangnas in the Northern Cape and Perdekraal in the Western Cape.

"Add to our considerable experience in the renewable energy sector, is the fact that we now have three 750 ton Liebherr LG 1750 lattice boom mobile cranes which offer enormous benefits on these projects," he says. Grotius highlights the importance of detailed engineering when planning each lift, and having the specialised skills fit-for-purpose and equipment, to meet the range of challenges. With tower sections



Johnson Crane Hire's LG 1750 lattice boom mobile crane. up to 81 tons, on site. Working in ule, we have

windy areas heightens

the need for high-tech

modelling and upfront

engineering, especially

when lifting the tur-

we do for each lift spec-

ify the maximum wind

speed in which we can

operate, and our safety

protocol ensures we ad-

here to these limits," he

says. "However, to get

the job done on sched-

"The lifting studies

bine blades.

weighing up to 81 tons, the nacelles up to 97 tons, and drivetrains about 60 tons, it is vital to have the right systems, equipment and expertise to lift safely every time," he says. The turbine hubs weigh some 30 tons and each of the three blades are up to 15 tons.

While the weight and size of the componentry is a key focus, so is the wind factor ule, we have the flexibility and resources to work through the night if necessary, when wind speeds are lower."

Johnson Renew was set up in 2015 to focus on renewable energy projects and has worked with various stakeholders to successfully transport, lift and assemble hundreds of wind turbines around South Africa and Namibia.

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Lifting specialist targets latest wind farms

them.

For similar reasons, the end-carriage mountings were designed to deliver a useful girder length 65 centimetres longer than the actual crane span.

On the other side of the globe, Condra Bulgaria has taken orders for three single-girder cranes: a 5-ton machine for the stores area of engineering company Yotov, in the city of Razgrad, and two machines with capacities of 5-tons and 3,2-tons for furnace work at the heat treatment plant of Bulgarian steel trading



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Friendly wire rope lubricants | New high speed hoists

IN a rapidly changing global climate and with every industry under pressure to mitigate environmental damage, even wire rope lubrication can play its part.

Wire ropes need to be well lubricated to withstand increasingly harsh climate conditions, especially in the maritime and mining industries, but the lubricants used on them can negatively affect the environment. Thankfully, products are now available that help to minimise adverse effects.

Llewellyn Owen, National Marketing Manager – South Africa at Lubrication Engineers South Africa, explains that in the maritime sector, having a non-toxic lubricant for wire ropes, moving chains and cable parts is particularly important for preserving marine life.

While environmentally friendly lubricants have long aimed to be biodegradable, the value of products like the EarthwiseTM range supplied by Lubrication Engineers (LE) South Africa is immense because of their focus on non-toxicity. LE's Earthwise EAL Wire Rope Grease (3353) is a certified environmentally acceptable lubricant and is recommended for use in applications on or near waterways. It is readily biodegradable, exhibits minimal aquatic toxicity and will not accumulate in the cells of fish and other aquatic life forms.

LE also supplies a wire rope lubricant, Wirelife® Almasol® Coating Grease, for the mining sector. This lubricant is highly tacky, ensuring that it sticks to the rope and doesn't fall onto the ground and affect the earth's surface where it is used.

"In addition to considering the direct environmental impact of the properties of products used in mainte-

nance, industrial operations can reduce their indirect environmental impact by ensuring that the lubrication products they use are of a high quality and keeps their equipment running well," says Owen. "Giving equipment a longer lifespan reduces the need to buy new parts and mitigates the impact on landfills, water and the broader environment from the discarding of old equipment and parts."

Efficient lubricant application that preserves equipment longevity, reduces lubricant waste and protects against excessive residual lubricant product falling to the ground can be best achieved by using quality lubrication equipment. "Wire rope lubrication is an essential

cation is an essential part of maintenance in the marine and mining environments, and modern lubrication equipment does a much faster and more effective job than traditional manual methods," says Owen.

LE launched its Viper wire rope lubricator at the Electra Mining show last year, and has received wide interest in the product, including the sale of its first three units into Angola. The Viper lubricator comes in three different sizes to accommodate different rope thicknesses. As the wire rope is passed through the Viper system, the lubrication is applied to the rope. provides grease It penetration, displaces moisture from the rope's core, provides total coverage, even for large ropes, and prolongs the lifespan and improves the performance of the ropes. The reduced risks of this system, as opposed to manual greasing, include it being safer for staff to use, using smaller volumes of lubricant and less leakage and mess. All of which has a positive long-term benefit for the environment.

BECKER MINING South Africa - the exclusive distributor of the Kito range of lifting equipment in Southern and sub-Saharan Africa since 1986 - has recently launched Kito Corporation's new Kito high-speed CB manual chain hoist series.

These hoists, which offer swift lifting and lowering speeds for increased productivity, are designed to safely handle rated loads between 2.5 and 50 tons.

"The Kito high-speed CB series is based on Kito's original automatic high/ low-speed clutch technology and is suitable for heavy-duty applications, where a load is repeatedly positioned and the empty hook is returned," explains Rick Jacobs, Senior General Manager (SGM) for consumables, Becker Mining South Africa. "Typical applications include heavy-duty lifting and positioning on a continuous basis; shutdowns in petrochemical and generation power plants, where speed and time is critical and also in shipbuilding and restorations.

"This versatile hoist encompasses a reliable load-sensing magnetic clutch and high-performance planetary gear system, which switches automatically from normal operation to seven times the lifting and lowering speeds of conventional hoists, when repositioning an unloaded hook - if the load is up to 10% of the Working Load Limit (WLL). A mechanical brake activates instantly and holds the load securely, for greater safety on site.



Kito high-speed CB manual chain hoist, offer swift lifting and lowering speeds for increased productivity, are designed to safely handle rated loads between 2.5 and 50 tons.

"When there is no load, or when the load is less than the lifting-switch load, operation of the hand chain moves the load chain in the high-speed mode. When a load reaches the lifting-switch load or greater and is suspended on the hook, the hoist automatically switches from highspeed mode to lowspeed mode. Once the load reaches the designated area and the operator stops moving the hand chain, the hoist will automatically return to the highspeed mode."

The load-sensing mechanism of this advanced hoist provides the user with significant time and cost savings, as well as improved worker productivity and reduced operator fatigue. Other key features of these robust hoists include an impact-resistant housing and a double-pawl with double-spring system. Maintenancefree sealed bearings increase reliability and reduce hand chain pull. Heat-treated gear and load-bearing parts are hardened for dependable performance, minimal maintenance requirements and extended service life.

Highly-abrasion resistant, heat-treated Kito nickel-plated DIN EN 818-7 load chain grade 100 for high uniform strength is supplied in lengths to suit exact requirements.

Becker Mining also supplies a full range of Kito accessories, designed to enhance performance of Kito hoists. These components include universal trolleys, available in plain or hand-geared configurations, to provide smooth, precise and easy traversing and positioning.

The Kito range, which conforms with stringent international quality and safety specifications, includes manual and electric chain hoists and lever blocks. Kito Corporation has SABS accreditation for the full range of manual chain hoists from 0.5 to 50 tons, as well as the full range lever blocks, 0.8 to 9 tons.

Becker Mining South Africa offers a technical advisory, repair, test and back-up service for the Kito range throughout southern and sub-Saharan Africa.

Conference targets wire, cable and tube industries

THE SA-German Chamber and CRU Events will be hosting the Africa Wire, Cable & Tube Conference from 11-13 November 2019 at Emperors Palace, Johannesburg, South Africa.



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Lines, Drill Lines, Sand Lines, Riser Tensioners, Tow Lines, Winch Lines and Crane Ropes.

The Cape Town branch is a DNV approved manufacturer of offshore, multilegged **container slings**, compliant with requirements of EN 12079 for handling offshore containers. The slings are manufactured using only DNV approved fittings, with all end-terminations compliant with EN 13411-3 specifications. The Haggie steel wire ropes used in this process are fully certified and manufactured to EN 12385-4 specifications. Only Crosby type G-21300 "safety pin bow" shackles are used, which includes a raised section on the body for the insertion of special client identification codes. SCAW metals is an official distributor of the Crosby, Verope and Yale premium quality brands in Southern Africa.

Haggie **Fishing ropes** provide the purse-seine and trawling industry with high quality ropes providing dependability and good rope life. Available sizes range from 12mm to 32mm diameter, with either fibre or IWRC steel cores.

McKinnon Chain (18) is a division of SCAW Metals that produces the McKinnon Chain and Max Alloy (18) brands. The McKinnon Chain facility in Vereeniging is one of the largest and most advanced chain manufacturers in the world.



1 0

The audience that will be attending the conference rage from:

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- · Global wire, cable and tube manufacturing companies,
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- Shipping, ports, storage and logistics companies

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To drive consumer behaviour you need to address the entire supply chain

By Jaco Saunders, Unit Lead at MACMobile



CHANGING consumer behaviour and creating loyalty throughout the supply chain are areas every FMCG manufacturer is trying to achieve. However, these are the last links and typically the most difficult elements to manipulate. This is due to challenges around validating sales - you can only reward loyalty if you can verify the purchase. In order to drive consumer behaviour and reward loyalty both on route to

consumer, you need to address the entire supply chain. Visibility and line of sight from start to finish are critical to gathering the required data necessary to achieve these goals. When it comes to loyalty, sales are always the primary Key Performance Indicator (KPI) and the measure of success is return on investment in sales figures. In the consumer space, brand loyalty and recall are both valuable, but a loyalty program that does not result in additional sales it is not effective. The reality is that you cannot create customer loyalty and drive increased customer sales without first having an

market and at the end

ket. In-store promotions, prizes, discounts and so on can help to develop certain brand awareness, but without ongoing effort this will fade. Loyalty

effective route to mar-

programmes are not a short-term endeavour but a long-term commitment. Manufacturers should therefore look at rewarding behavioural change not simply to create a pull from consumers, but also a push from route to market. It is important to have your products in the right place at the right time in the right condition, so that customers are able and want to purchase them. Route to market par-

ties such as distributors and retailers are often incentivised based on stock volumes. However, there are also many soft elements that are instrumental in creating loyalty, including the way products are displayed, the correct placement of point of sale material, the condition of the products in store and much more. These too should be incentivised. The

should also speak to

two levels, specifically

themselves

for the distributor or retailer business, and for individual people in those organisations. For example, a bar could be rewarded with promotional materials and stock, while managers and even service staff can be given tangible, personal rewards like airtime or even financial incentive. These individuals will then be more motivated to promote product to customers making it a win-win outcome for all parties involved.

Without data, manufacturers are effectively blind, with no baseline or point of comparison. With no insight it is not possible to allocate rewards, drive behaviour or even see if there is a change.

Data is at the heart of improving the supply chain and rewarding the relevant parties throughout, which in turn will help drive loyalty as well as maximising sales.

Extended warranty for lift trucks

GOSCOR Lift Truck Company (GLTC) has introduced a standard 5-year warranty on its Doosan 7 Series range of lift trucks - thought to be the longest ever warranty to be offered in the South African forklift industry. GLTC Sales Director Patrick Barber says warranty is a valuable component of any capital equipment purchase, especially mission critical and bigticket purchases such as lift trucks.

"The pertinent reasoning behind the extended warranty is the fact that the initial capital investment on these machines is very high. Therefore, to retain the value on the product, the warranty is a significant component of the product lifecycle," says Barber.

While different lift trucks from different manufacturers may have different price tags, the length of warranties has largely remained the same for years, pegged at 12 months, which is an industry norm. GLTC's new warranty can be regarded as a game changer in the industry which can lower the overall potential cost of

ownership for opera-

tors.

"We have been supporting the Doosan product since 1994 and have come to trust the build quality of this Korean product. We have worked closely with our principal, Doosan, to develop a product that meets our local operating conditions and support it with a fitting warranty that gives customers the peace of mind they need, especially in these difficult operating conditions," says Barber.

GLTC has also invested heavily in skills development with the establishment of its merSETA accredited Training Centre.



Going solar saves thousands on transportation costs

rewards

SINCE partnering with its first major national retail client in 2017, Resurgent Energy has remained the trusted solar logistics developer and product supplier to the South African transport industry. Innovation and technology are key differentiators in the highly competitive solar market. With its diverse expertise, commitment to quality standards and innovation-driven culture, they have introduced game-changing stratagems to the benefit of their clients.

Its Solar Logistics solar and battery storages systems - vastly reduce the dry and refrigerated goods trailer's reliance on diesel fuel, translating to a quick investment pay off period and immediate fuel cost saving coupled with increased productivity of assets, to their clients. These solar systems are powerful enough to power the Cryo-refrigeration unit, a tail lift system,

tracking systems simultaneously - allowing the trailer to power up and operate independently from the truck, for a

guaranteed minimum period of five years. A case study of a current client which converted over 600

fleet trailers to Solar Logistics, revealed how its technology has resulted in impressive savings:

- They save R 64,6 million off their bottom-line over 5 years.
- They have achieved a 28% reduction on their Business Income Tax.
- They further save on Carbon Tax by reducing their Carbon Emissions by 35 480 tons.
- They reach a ROI break-even point within 2 years of installation for each solar system fitted.

Contact nadia@resurgentenergy.co.za for more information.



Solar and battery storage packages are **custom designed** by Resurgent Energy for **Refrigerated and Dry Consumables Transport** trailers that require an independent power source from the truck.

Designed to power any combination of:

- Trailer tail lifts and Electric Pallet Jacks drastically reducing vehicle Diesel consumption during loading and offloading
- Interfaces with fleet tracking systems for complete solar data

full security and fleet

- Security systems comprising of multiple cameras
- Tracking and remote locking
- Cryo-refrigeration system

Maintenance provided nationally using centrally managed digital inspection, job carding and tracking systems together with solar data integrated into Fleet Management portals for pre-emptive maintenance. All systems are **locally manufactured, with custom built** Lithium Iron Batteries manufactured **in-house** in accordance with customer specifications.





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FISHING

Aid creates new interest in rural fish farming

aimed at introducing

"I started off with

By Alex Bezahler, a **Research and Commu**nications intern with Food Tank. Alex recently graduated from Temple Law School in Philadelphia, where he focused on environmental law and natural resource regulation. He has also worked on organic farms throughout the United States and regularly volunteers on local urban farms in Northern California.

INNOVATIVE aquapractices culture brought about the West Agriculture Africa Productivity Programme are opening new employment opportunities for young Nigerians.

Several years after communities were trained in fish farming, integrated aquaculture, and new ways of producing quality fingerlings, thousands of youths and families have either joined fish farming or expanded their farms and as a re-



sult, increasing their incomes and livelihoods.

fish farming in Monai Alahji Rilwan Movillage. Like many othnai is a 40 years old resers, they were taught ident of Monai village, fish farming techon the outskirts of New niques including pre-Busan in Niger State, paring and managing Nigeria. He has been ponds, rearing fingerin fish farming for lings, and managing about 15 years. At 25, water. he mostly fished off the Kainji Lake. Culturing two ponds, but I am now fish was almost foreign operating 13 ponds," he to him at the time.

says with confidence. But things changed A ton of catfish sells substantially with the in Nigeria for about N arrival of the West Af-750 000 (USD 2 000). rica Agriculture Pro-"I have to be honest ductivity Programme that this has increased (WAAPP) in 2008. my income consider-Rilwan was one of the ably. It is with the revfirst beneficiaries of enue that I built my the WAAPP program house, bought my cars

and now planning to marry a second wife," says a beaming Rilwan.

For someone living in rural Nigeria with most of the population living on an average of USD 2 per day, this is significant. As a result, he sees no reason to envy his peers who are living in cities or traveling abroad.

Most rural youths in Africa seek to travel to cities or abroad in search of white-collar jobs or greener pastures.

"This has never been my dream. I make enough and do not plan to move away from my community," says Rilwan.

"There is more money in fish"

39 years-old Hafsat Oladele of New Busan operates both a cement shop as well as a fish farm. After years of managing both, she does not mince words with respect to which of the activities generates

more revenue for her. "There is more money in fish," she said unequivocally when asked to compare both activities.

Oladele operates seven fish ponds of an average of 1 000 catfish each. When she harvests, she makes significant income which allows her to assist her family as well as take care of her needs.

When we spoke to the many youths of Monai village, many explained that fish farming had become their major source of subsistence and employment. Almost every household in Monai, now operate a fish pond, experts say.

Exponential growth of aquaculture in Monai

When WAAPP was introduced in Nigeria in 2008, the three leading institutes making up the Aquaculture National Center of Specialisation, picked a few villages to pilot new practices.

In New Bussa, the National Institute for Freshwater Fisheries Research (NIFFR), started a demonstration plot in Monai.

"When we came to engage with the village, the community Head was not too sure what we were trying to do. There were just a handful of aquaculturists in Monai back in 2008," says Dr. Attahiru Mohammed Souley of NI-SPR.

Today out of about 5 000 inhabitants in this village, almost everyone is practicing aquaculture.

With increased production, one may think this may pose demand challenges.

"There is a huge demand for what we produce," says 42 Alahji Rayyanu İbrahim.

İbrahim, another Monai resident now has a total of 12 ponds including two for fingerlings. In 2018, Ibrahim harvested close to 50 tons selling at N 750 000 (USD 2 000). This represents about USD 100 000 per year. Ibrahim's economic comfort has reached a point where he says, he does not see himself doing anything else other than fish farm despite some of the challenges that they face. "With my income, I can send my kids to any school that I want. I can afford the medication of my kids as well as improve the living standards of my family," says Ibrahim.

Empowerment for subsistence fishers

ENTREPRENEUR-SHIP training is bringing a ray of hope to subsistence fishing communities in marginalised coastal areas of the Eastern and Western Cape, equipping them with the business skills to better operate in the fishing sector as well as accessing alternative income opportunities beyond fishing.

The Alternative Livelihoods Project by the Fisheries and Aquaculture Development Institute (FADI), funded by the SA International Maritime Institute (SAIMI), will also provide training in construction skills, enabling fishers not to be solely reliant on increasingly uncertain income from fishing, and easing pressure on South Africa's declining fish stocks.

Launched in June-July in Ocean View (Cape Town), Kenton-on-Sea (Eastern Cape) and Saldanha Bay, the project will benefit up to 90 fishers, 30 in each area, with a wider positive impact on food security and poverty alleviation for their families and communities, FADI project manager Sulaiman Appoles said.

The project includes training in practical entrepreneurship skills including compiling viable, bankable business plans, managing finances and marketing, identifying business opportunities, registering a business and ensuring compliance, and linking up with networks such as business chambers or industry bodies, supported by mentorship and business coaching.

The beneficiaries include traditional subsistence fishers, underor unemployed fishing crew, existing and pending rights holders, seasonally-employed fish processing workers, and the youth of fishing families.

"It is anticipated that the Fisheries Branch of the new Department of Environment, Forestry & Fisheries (DEFF) will commence allocation of rights to small-scale fisheries co-operatives during the Fishing **Rights Allocation Policy** Process (FRAPP 2020) process, so business skills and entrepreneurial skills will provide an added benefit to the beneficiaries," says FADI chairperson Jeremy Marillier. Chair of

Marwanqana said the

co-op's members cur-

rently caught fish simply

for survival but were

looking forward to be-

ing in the business of

fishing, and the skills provided by the FADI project were "what we have been looking for, they will take us far"

"The main thing is business skills - our co-op must run like a business and be able to market and sell our products. Previously, we have focused on looking for employment - this project is giving us the key to self-employment," Marwanqana said.

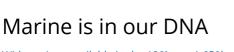
Appoles said that the entrepreneurial and construction skills provided by the project would not only improve and diversify fishing communities' income streams, but also over the longer-term reduce the pressure on marine resources and allow the rebuilding of fish stocks.

Marillier emphasised that the Alternative Livelihoods programme was intended to complement income from fishing, not to replace it.

Small-scale fishing is a relatively new sub-sector of the commercial fishing industry, with government's Small-Scale Fishing Policy (SSFP) aiming to include traditionally subsistence fishers in the value chain, with access to economic opportunities and markets, contributing to sustainable livelihoods, nutrition and food security, poverty alleviation, and sustainable use of marine resources.

Development of the small-scale fishing sector is intended to enable fishing communities to participate in the full value chain, generating income not only from fishing but also related activities such as fish processing and sales, net-making and repairs and maintenance of fishing vessels and engines. "We firmly believe that skills development and training must have a purpose, that it must lead to genuine opportunities for employment or for entrepreneurship, even to creating employment for others based on the skills that have been learned. We are confident that the Alternative Livelihoods Project wil





With engines available in the 130hp to 1,650hp range for vessels of up to 60m, Baudouin and Peninsula Power Products are well-placed to provide a cost-effective alternative to the local maritime sectors











deliver on that vision," Baninzi said. Entrepreneurship training had already started in the Ocean View community, Appoles said, and more than 90% of the participants said the skills already gained were "significant and had the meaning for their ambi-Ekuphumleni Co-op in tions". Kenton-on-Sea, Mzamo

He said training in construction skills was selected as the avenue to alternative incomes due to the demand for skills at all levels of projects in all areas.

Zero maintenance valves reduce costs at sugar mill

WOUTER WITZEL butterfly valves provided substantial cost-savings and reduced personnel requirements for Kwa-Zulu Natal-based Umfolozi Sugar Mill (USM). The savings enabled the company to redistribute finance to other plant instrumentation upgrades and negated the need for specialised valve maintenance personnel. This facilitated the redeployment of these personnel to other plant maintenance tasks. The Wouter Witzel DN700 butterfly valve, installed to regulate flow in one of the plant's pan discharge applications, remained unaffected by the severity of the production process for more than six years – without any maintenance.

In a letter to suppliers, AVK, Ravi Vandayar, Technical Manager at USM, stated that: "The superior quality of the Wouter Witzel butterfly valves used in a pan discharge application at USM is noteworthy. Functioning under -95 kPa; at 75° C normal operating temperature and 110° C flash temperatures, the valve in question had a lifetime of more than six years with zero maintenance required. Others are still in service."

"A unique differentiator that sets Wouter Witzel valves apart from competitor products," explains Keith Hedges, Business Development Manager, AVK Southern Africa, "is that its elastomer liner is fully vulcanised and bonded to the seal body. This provides a 100% leakfree and vacuum-proof seal - both of which are exclusive to the Wouter Witzel brand."

Zero leakage, zero maintenance

USM runs on a seasonal basis and maintenance is conducted during offseason plant shutdown. The maintenance inspection subsequent to this valve installation included valve removal, damage inspection and functional scrutiny which it passed with flying colours. It proved the valve's durability compared to the wear and tear that competitor valves underwent. Based on these findings, USM took the decision that future maintenance inspections for this specific valve would be reduced to a liner inspection and water test only. The water test is used to determine if there is any seal leakage, and none was ever found. "This is in line with our, and Wouter Witzel's, philosophy of 'zero leak-

age, zero maintenance'," says Hedges. "USM was sufficiently impressed with the inspection results that the plant began replacing its existing butterfly valves with Wouter Witzel valves, as and when required."

Heat resistance and durability

Wouter Witzel butterfly valves are heatresistant, using NBR, EPDM or FPM rubber lining, which offer heat resistance up to 90, 110 or 200° C respectively. High-quality construction materials like ductile iron or cast steel on a single bodied valve; and a Rilsan, Epoxy or Halar coated duplex stainless steel disc contribute to enhanced durability. The disc, centre to the valve's design, is thinner than conventional valve discs which facilitates increased flow capacity and smaller actuators – if actuation is required. This contributes to increased pump efficiency resulting in lower power requirements.

This range of butterfly valves can be installed in the fully closed position, something which cannot be achieved with regular mounted valve seals. The five year warrantee is five times longer than the industry standard, and is backed by a onemillion-cycle guarantee. "Compared to other butterfly valves in the mar-

ket, ours last three to five times longer than any other similar product," Hedges enthuses.

Valve accreditation

The Wouter Witzel butterfly valve range is accredited by the American Petroleum Industry (API); Lloyd's of London for marine applications; and the South African Gas Association (SAGAS). It also has numerous water-related certifications and is the only rubber-lined butterfly valve worldwide that has a fire-safe certification. "These valves are suitable for the mining, steel, ship-building, oil & gas, desalination, HVAC, power plant and fire-fighting industries," Hedges says. "In fact, they are specifically designed for high cycle and severe applications.

In line with its commitment of adding value to its clients in all aspects, AVK Holdings established an in-house training Academy in September 2016. "The Academy has trained and raised the skills and technical capability of our employees, clients, distributors, students and engineers in understanding valves and their applications," Kloppers concludes. "We consider this a value offering beyond that of any tangible Rand value offering."

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ability to create strong

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in very complex shapes

through additive manu-

facturing, which fun-

damentally will change

the way industries will

be able to use this ma-

terial. As of now, the

only limit to how this

super-hard material can

be shaped and used is

down to the designer's

imagination," says Mi-

"We now have the

impossible.



SANDVIK Additive Manufacturing has created the first ever 3D printed diamond composite. While this diamond does not sparkle, it is perfect for a wide range of industrial uses. This super-hard material can be 3D printed in highly complex shapes and can revolutionize the way industry uses the hardest natural material on the planet.

Diamond is harder than anything else in nature. It is a key component in a large range of wear resistant tools in industry, from mining and drilling to machining and also medical implants. Since 1953 it has been possible to produce synthetic diamond, but since it's so hard and complicated to machine, it is almost impossible to form complex shapes.

By using additive manufacturing, Sandvik has managed to 3D-print diamond composites which can be formed in almost any shape. This opens the kael Schuisky, Head of R&D and Operations at Sandvik Additive Manufacturing.

The difference between Sandvik's diamond and natural or synthetic diamond is that Sandvik's is a composite material. Most of the material is diamond, but to make it printable and dense it needs to be cemented in a very hard matrix material, keeping the most important physical properties of pure diamond.

"Sandvik's 3D printed diamond composite is a true innovation. It means that we can begin to use diamond in applications and shapes never conceived possible before," said Susanne Norgren, Adjunct Professor in Applied Materials Science at Uppsala University. "Just imagine what it could do to industries, when it is possible to print anything, in any shape - in diamond."



Robotic solutions

AUTOMATION is indispensable nowadays in the day-to-day operation of machine tool manufacturing. With WFL Robotic Solutions, there are no limits due to the modular concept:

From articulated robots to portal loaders with various gripper designs, all types of workpieces can be processed or moved. The flexible robot solutions can transport up to 500 kg workpiece weight. Not only high weights are a decisive argument, but also the broad range of robots, which contributes to the optimal concept creation.

Reducing the cost of multi-machine chaining, flexibility, small footprint and free access to the operator side are just some of the benefits of WFL Robotic Solutions. WFL provides effective solutions with maximum yield for production.

Performance with SmoothG Control





MAZAK Corporation has enhanced the already exceptionally productive VTC-200C Vertical Machining Center with the addition of the MAZA-TROL SmoothG CNC and its suite of Smooth Technology software solutions. The control complements the VTC-200C's full traveling-column design, automatic tool changer and powerful 40-taper spindle all of which combine to enable fast cycle times and accurate machining for extremely long and heavy workpieces in industries such as construction, agriculture and energy production. Job shops and major manufacturers alike will benefit from the VTC-200C's MAZATROL new SmoothG CNC and its innovative programming, performance and monitoring functions, as well as the ability to use both EIA/ISO and conversational

programming to bring optimum speed and accuracy to complex part production. Advanced hardware – including a pivoting CNC panel and intuitive, 19" multi-touch LCD control screen – allows for complete ease of use, while a CFast memory card stores up to 32GB of program data. The VTC-200C ma-

chine platform delivers a standard 15 000 r/ min. 22 kW (10% ED, 110 nM) spindle capable of handling a wide variety of metal cutting applications. Additionally, the machine rapid traverses in all axes at a rate of 40 mm/min, while its standard integration of Intelligent Thermal Shield (ITS) software helps maintain machine accuracy in a wide range of factory environments. The machine's fixed 2 000 mm by 500 mm table provides process flexibility for a wide range of applications, and its optional center

partition can divide the work envelope into two separate work areas to allow the machine to be in cycle in one area while operators load, unload or set up a part in the other. The machine's axis travels measure 1 660 mm in X. 500 mm in Y and 500 mm in Z. For further process flexibility, manufacturers can double the standard 24-tool automatic tool changer's capacity with an optional 48-tool magazine or upgrade to a 37 kW, 20 000 r/ min integral spindle. Additionally, the VTC-200C can integrate seamlessly with a variety of robotically loaded solutions provided by Mazak Automation Systems, and its new SmoothG control makes it easy to take advantage of machine monitoring software such as SMOOTH Link and HoT connectivity tools such as MTConnect® and the Mazak SmartBox.

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Registration opens for Automechanika

VISITOR registration has opened for this year's Automechanika Johannesburg trade fair for the automotive aftermarket, which will take place at the Expo Centre, Nasrec, from 18-21 September.

Free visitor passes are available online from www.automechaniksa.co.za

This year's trade fair - the sixth to be staged in Johannesburg - is expected to attract more than 600 exhibitors from over 20 countries, and 12 000 visitors.

Automechanika will be co-located with two other shows: the Futuroad Expo for commercial vehicles, trucks and buses and Scalex Expo, a trade fair for transport systems, infrastructure, and logistics solutions. All these events will target visitors from sub-Saharan Africa.

"We have a big drive to attract key buyers from around Africa and will be conducting road shows to eight key countries in Africa over the coming months. We are also pleased to announce that both the DTi and South African Tourism are offering funding for a hosted programme buyer from these countries. We encourage our exhibitors and companies who will participate at Automechanika and its co-located events to invite their clients in Africa, through this funding" Says Joshua Low, Managing Director at Messe Frankfurt South Africa.

Automechanika Johannesburg and its colocated shows will ensure that Expo Centre will be a meeting place for people involved in many different aspects of the transport and logistics industries in Southern Africa. As usual, many companies and organisations are making use of this event to stage conferences, workshops, and training sessions.

There are already 15 high-level conferences that have been confirmed to run alongside Automechanika Johannesburg and its co-located events. Some of the organisations that have already confirmed that they will be running conferences alongside Automechanika Johannesburg include the Retail Motor Industry organisation, Fuel Retailers Association, Collision Repairers Association and the RMI REMAN Cluster.

In addition, the Motor Industry Associa-

tion of Zimbabwe will hold its annual conference at Expo Centre during the event. This will be the first time that this annual congress, which attracts top level buyers, will be hosted outside of Zimbabwe.

An important innovation for the 2019 edition of Automechanika Johannesburg will be a Virtual Reality Zone where visitors can experience the latest automotive repair and servicing technologies through virtual reality. "Apart from the conferences and virtual reality zones, we will have free-to-attend workshops running in halls 5 and 6, and demo areas, where interactive and experiential content will be on offer. Some examples of this content include an international spray-painting competition, a turbo charger repair compe-

tition, among others" adds Low. "We realise that interactive opportunities are increasingly important for visitors to trade fairs and other exhibitions worldwide, so we encourage exhibitors to make use of this strategy for their display stands at the show in September," explains Low.

Africa Oil & Power 2019

AFRICA Oil & Power (AOP) conference returns to Cape Town on October 9-11, with 20+petroleum and power ministers to speak on the theme #MakeEnergyWork.

As the sole platform days, with more than 20 taking an integrated ministers and dignitarapproach to oil, gas and ies to speak on the main power and economic stage. An expanded exgrowth. AOP drives hibition hall will host tries tough conversations as pavilions dedicated to Africa sees massive ad-South Africa's energy sector, technology and vancements in its power sector and moves to digitization, renewable develop historic oil and power, oil and gas sergas discoveries. Under vices, and more. In 2018 Africa Oil #MakeEnergythe & Power's Cape Town Work theme, AOP 2019 will show how oil, gas hosted conference and power can generministers and minate greater opportuniisterial delegations ties for the people of from South Africa, www.aop2019.com

African nations and stimulate sustainable economic growth.

At this year's 2019 conference and exhibition, Africa Oil & Power will welcome 1 200 delegates over three

Brazzaville, Somalia, Equatorial Guinea, Gambia, Ivory Coast, Senegal, and Zambia, as well as the secretaries general of OPEC, the African Petroleum Producers' Organization, the International Energy Forum and the Gas Exporting Coun-

South Sudan, Congo-

Forum. Over three days, almost 100 speakers and panelists addressed delegates from all over the continent on the theme Energy Coalitions.

Learn more about Africa Oil & Power's 2019 flagship event

and book your space at

The African Agri Investment Indaba

19 - 20 November 2019, CTICC, Cape Town

vestors, project owners, project developers, commercial farmers and the agro and food processing industry – to discuss trends that will likely influence food and agribusiness economics over the next

decade in Africa. Organised by the African Agri Council in partnership with African governments and government agencies, the Indaba delivers a unique mix of decision makers from across the

agri value chain making it the most effective place to conduct business in the sector. To register, visit: https://portal.touchwork.com/survey/ view webpage.php?webpage-code=12c54

'Three shows, one roof'

THIS year, for the first time, Specialised Exhibitions Montgomery added a third co-located show to run alongside Securex South Africa, the continent's leading security and fire trade exhibition, and A-OSH EXPO, Africa's biggest occupational health and safety expo, including the Facilities Management Expo (FM Expo) to a mix that brought in 10 290 visitors to Gallagher Convention Centre in May this

Sven Smit, portfolio director at Specialised Exhibitions Montgomery, explains: "There are significant overlaps between the requirements of the built environment as well as physical and cybersecurity, and occupational health and safety. The decision to add FM Expo into the existing Securex and A-OSH EXPO colocation meant that, as the event organisers, we were able to bring together a number of synergies between the three shows.

"Securex and A-OSH EXPO were both co-located for some years previously. Specialised Exhibitions Montgomery was able to acquire FM Expo in late 2018, and prior to that it had a seven-year track record. The combination of the three shows for the first time

this year moved the offering up a notch, as together they now bring visitors a consolidated view of the entire supply chain, within one venue, over a full threeday period."

The 2019 numbers ata-glance

Securex saw 6 046 visitors attending, while A-OSH EXPO and FM Expo registered 3 692 and 566 visitors respectively. A number of visitors commented that no matter which show they had registered for, they had nonetheless seen at least one other show, if not all three. For example, of FM Expo visitors, 167 said they had attended all three shows.

In terms of visitors who make or influence purchasing decisions, this number was reflected as 84 percent for Securex, 76 percent for A-OSH EXPO and 83 percent for FM Expo.

There were visitors from 39 international destinations for Securex alone, while A-OSH EXPO registered delegates from 22 countries, and FM Expo, in its first year, registered one official international visitor, but also benefitted from the crossover from the other two shows.

The best represented African countries included Botswana, Mobenefits of exhibiting at zambique, Mauritius, trade shows include the



Tanzania. Namibia. Zambia, Ghana and Zimbabwe, while other global visitors came from destinations as far afield as China, India, the UK, Australia and the United Arab Emirates.

"On a daily basis, consumers are faced with a flood of online posts, including both traditional media as well as social media platforms, bringing information from marketers about their products and services." notes Smit. "But we also know the real value of seeing potential customers face to face - which is where trade shows come in. The

networking and sales opportunities, and the chance to stay on top of industry trends and consumers' issues and needs. In a nutshell, exhibitors gain access to a targeted, interested audience, while the visitors in turn are able to stay on top of the latest thinking and investigate new offerings first-hand."

Securex South Africa, A-OSH EXPO and FM Expo will return to Gallagher Convention Centre in Johannesburg from 02 to 04 June 2020.

Find out more at www.securex.co.za www.aosh.co.za and www.fmexpo.co.za.

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Coding made simple

MARKEM-IMAJE's 9000 Series of small character inkjet coders are full-feature printers that are designed for demandmanufacturing ing environments, general purpose, and very specific applications, such as high-contrast and high-performance marking.

Markets for these coders include food, beverage, cosmetics, toiletries. electrical equipment, electronics, cables, tubes and profiles.

consumables The for the 9000 Series are designed to print on all types of substrates (plastics, glass, metal, cardboard and directly onto food) from standard to specific applications, including food grade, sterilisation, UV cure and egg coding to name a few. They are also available in a wide variety of colours, and a choice of alcohol-based, water-based, ketone-free and MEK-free inks.

Markem-Imaje's small character inkjet 9029 Key benefits include:

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user interface and to operate. The M6' all-in-one ink

circuit runs for approximately 6 000 hours, and the time it takes to change consumables is less than six minutes and no additional maintenance is needed.

Print features include up to four lines of print at a speed of 4.4m/s, and font heights from 5 to 24 dots. Character heights range from 1.8 to 8.7mm with a choice of characters that includes Latin, Arabic, Cyrillic, Greek, Japanese, Chinese, Hebrew and Korean.

The message library stores up to 100 messages, and the WYSI-WYG backlit blue screen offers an international operator interface with a choice of 31 languages.

Atlas Copco

Industry shifts towards sustainable packaging

IN a growing industry shift towards sustainable packaging and product design, one of South Africa's largest manufacturers of wood-based products, PG Bison, has decided to use only locally sourced and recycled polyethylene terephthalate (rPET) strapping.

According to PG Bison's chief executive officer, Gerhard Victor, the company uses 9.1 million metres of plastic strapping per annum to bind its wooden surfacing and decorative panel products, with the recycled rPET material set to divert the equivalent of five million post-consumer plastic bottles or 115 tons of PET from landfills every year.

Instead of importing its signature green strapping from Italy, Victor said PG Bison would now source the local equivalent from Cape Town-based supplier Propet, which uses locally sourced post-consumer PET bottles in its manufacturing process.

Recycling PET Company (PETCO) chief executive Cheri Scholtz said the move was a boon for keeping plastic waste out of the environment. She said it was encouraging that industry was starting to see the bigger vision and economic value inherent in the recycling of PET.

"Nationally, the recycling rate for PET plastic is a significant 60%+pa and comprises mainly clear and blue plastic bottles, which are more feasible to transform into a range of recycled materials including polyester fibre."

"What is exciting about rPET strapping is that it can be made from green plastic bottles, which have had a limited end-use market to date. As other



manufacturers make the switch to locally sourced rPET strapping, like PG Bison has done, we'll be able to make better use of coloured plastic and grow our overall recycling rates even further," said Scholtz.

"Nationally, the recycling rate for PET plastic is a significant 60%+pa and comprises mainly clear and blue plastic bottles, which are more feasible to transform into a range of recycled materials including polyester fibre."

Victor said recycled strapping now conformed to stringent technical specifications, such as high tensile strength, and, most importantly, mainproduct tained the stack integrity during handling and transportation.

"At PG Bison, we use strapping on almost every product that we manufacture. Because our wood is locally, responsibly and sustainably sourced, it was important for us to extend this approach to the packaging of our products too," explained Victor.

"For safety reasons, the strapping is singleuse, but it can be recycled after collection."

Propet director Chandru Wadhwani said a responsible approach by more players in the manufacturing sector would assist the plastics industry to fulfil its extended producer responsibility and drive PET recycling rates in South Africa.

"As we have often witnessed, without willing users of products made from rPET, we would be leaving behind far more PET bottles destined for the landfills and oceans,' said Wadhwani.

Wadhwani added that the new production line for Pro-10 Strap[™] featured the same European technology, by SIMA, used by strapping manufacturers worldwide.

"As such, quality requirements from customers like PG Bison will be met comfortably and, in some instances, surpassed. With its ISO accreditation, it also provides improved traceability and assurance of quality.'

He said this was another example of helping companies to meet their Extended Producer Responsibility objectives through the recycled PET value chain without any compromise on quality.



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OPINION

The pitfalls of protecting the public

Continued from back page

ing the PP to her conclusions. On pages 89 and 90 her report states Manyike was a special agent with the border control unit, which she says was the 'rogue unit'. She writes that unit members were trained in tracing, tracker installation, surveillance, weapons, bugging, systems breaching, sleep deprivation and other nasty things.

"Manyike's evidence, writes Mkhwebane, shows that the 'rogue unit' stole mail, intercepted e-mails and phone calls and got hold of bank statements. They also meddled in politics. She cites no supporting evidence. While literally cutting and pasting from the Peega dossier, she presents the result as evidence by 'specialist agent' Manyike. He was never interviewed by her and Peega is not mentioned in her report.

"As for Manyike himself, he is quietly going about his Rasta business in Mahikeng, blissfully unaware of his new status. When Pauw interviewed him, he said, 'She is completely wrong. I am only aware of vague rumours about this rogue unit. I have no real knowledge. I was never involved in any of that. She is completely wrong'."

"Hmmm," muttered The Prof, "and still the ANC drags its feet. Makes you think.

"Makes you drink," corrected Luke the Dude.

E-mail: noag@maxitec.co.za

It's summer in the north and surprise, surprise, it's hot!

Continued from back page

The guests nod their heads in agreement. It's all the fault of filthy capitalists-Big Oil, Big Pharma - and all those rich companies who make and sell things that make them comfortable, allow them to keep their teeth after they reach the age of forty, pass their allotted three score years and ten and still manage to walk upright, raise healthy children free of ancient scourges like measles, mumps, chickenpox, smallpox, whooping cough, and tuberculosis.

Look around these comfortable, welloff homes set in the best parts of towns in Europe, America, Britain and alas, even here) Observe:

Green Galoshes made of plastic for the muddy time of the year when they take their two dogs for a run in the park or in the fields adjacent to their second home in the country.

A diesel-powered people carrier in the garage. It's for driving the kids to school and shopping in an out-of-town emporium packed with Chinese made goods like padded jackets, cellphones, laptops (every child must have one).

Dad's car rests in the garage but only at night. It is supplied by the company he works for where, hush, they make profits! During the day this car is parked at the railway station. In fact, the poor man rarely sees his children in daylight in the winter, but luckily he gets a good whack of cash every month to pay for heating the house for four months of the year or more in the north of Europe, and every second year the family can jet off to somewhere hot in the southern hemisphere (Business Class of course. He has so many air miles to spend because of his business air travel).

Of course these families feel ever-so guilty about their life style. But then they do go on climate change marches in the summer and once a week it's vegetarianmeals-day.

They tell themselves and their friends that they are doing their bit. If the schools' fees were not so high, they would put a solar water heater on the roof, not that it would do much good in the northern winter, but still, it's the thought that counts. They would put a wind generator on the roof as well but the neighbours say it's too noisy and there really is no room for all the batteries.

If this reads like a diatribe against hypocrisy, it is just that. Why bother? Because the theory that the world's climate is changing because of carbon dioxide emissions of modern economies is just that, a theory. It may be true to some extent but saying it is a fact that will lead to the end of life as we know it, is not proven. And unlikely. Satellite photographs show the greening of the planet - as any greenhouse gardener could have predicted without the aid of a computer. Plants love carbon dioxide.

Every computer-driven prediction made to date of tipping points, last chances to save the planet, and other climate scares has failed to materialize.

It's alarmism or millenarianism, end of the world nonsense, a modern manifestation of what used to be demonstrated by a bearded man dressed in sackcloth wearing a sandwich board declaring that "The end is nigh!" on one side and "Re-

We used to pity such sad people. Now they come at us dressed not in sackcloth but in the latest fashion, hair quaffed for the cameras. They lecture us in our homes on the television. They dominate the headlines in newspapers and magazines.

They are not down-and-outs, but the elites of our society. They pose as privileged receivers and purveyors of scientific knowledge, but they are politicians, not scientists in the true sense - seekers after truth by experiment and the empirical method.

entists who do know the difference between hypothesis and proven fact, they can peddle falsehoods with the straightest of faces. They truly believe they know the truth about climate change and its causes. And they want to warn us, the unwashed and ignorant, and assume to order us about like high priests of old.

But in their heart-of- hearts they think the same thoughts that the privileged have always thought:

"There are too many of them and not enough of us".

It is such thinking that paves the path to (a Green) tyranny.

pent now!" on the other.

Worse still, because they are not sci-

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- Civil Engineering / Projects in progress
- · Financial Services: Funding / Factoring / Risk Management / Business Advisory Services
- · Food, Beverage and Wine Supply Chain
- HVAC / Temperature Control
- Hydraulics and Pneumatics
- Industrial Development Zones / Infrastructure & Development
- Instrumentation and Process Control Management
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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.

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Unemployment up to 29%: are we insane?

STATSSA announced at the end of July that the official unemployment rate is now 29% up by 1.4% in one quarter. The expanded (unofficial) unemployment rate is now 38.5%.

Although this is shocking, it is not unexpected. We continue doing all the wrong things; how can we expect any other result? Doing the same thing but expecting a different result, is Einstein's definition of insanity. South Africa's unemployment crisis is not a reflection of what is happening elsewhere, not even in Africa. Our unemployment rate is the third worst in Africa. Our growth expectation is below 1%, while the rest of Africa is booming - Botswana (4.5%), Cameroon (3.9%), Ethiopia (6.8%), Kenya (6.3%), Lesotho (1.5%), Madagascar (5.2%), Mozambique (3.3%), Rwanda (8.7%), Tanzania (5.2%) and Zambia (3.8%) – to mention a few. What do we expect though? It is not exaggerating to suggest that, although a lot has been said, nothing is done to create a more conducive environment for business in South Africa.



in Business Day that Eskom is cannibalising the country's future.

The perceived righteous portion of our political leadership avoids making the hard political decisions - making the popular instead of the right decisions - waiting for a more conducive political climate. To the President and those supporting him, my suggestion is: act now; the situation will not improve.

"Behold, now is the time of your, now is the time for sai vation." 2 Cor. 6:2. Although this was written for and within a different context, the same principle applies. Those who have made it their aim to harm South Africa, cannot be tolerated any longer, not for one single day.

In modern countries of the world, over 95% of businesses are SMEs, employing 60 - 70% of the working population. While SMEs make up 98.5% of South African business, they only employ 28% of the formal workforce.

On 29 July 2019 Engineering News reported that foreigners are ditching South African assets at the fastest pace on record as concern mounts that the government will lose its last investment-grade rating. On 30 July 2019 Claire Bisseker wrote

The hard decisions which can turn South Africa around, undoing the extensive damage done over the last decade, must now be taken or the opportunity will forever be lost. Those standing in the way of rescuing South Africa can no longer be entertained.

This opinion piece is by Gerhard Papenfus, Chief Executive of the National Employers' Association of South Africa (NEASA). He writes this in his personal capacity.

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The pitfalls of protecting the public **OP**

T was a windy and wet winter's day as the usual congregation of gregarious conversationalists sought out the warmth of the local pub and grill. Although my wife does allow me to drink at home, I was sitting in my regular corner with the Big White Dog, quietly sipping a draught and minding my own business. Not for long.

"Yes! Yes! Yes!" pronounced Luke the Dude. "Look at all these survivors of drowning! Now I finally understand what Margaret Thatcher intended when she called her critics 'The Wets'."

"I don't know what you mean," disagreed Big Ben, "we are all dry and warm in here, while outside the dams are getting fuller. What's not to like?" Good old Ben, always looking on the bright side.

But he was right. The Governor had made a fire and Angie the Angel was keeping an eye on the levels of our glasses.

"So, what do you say about the general state of our country," enquired Luke the Dude, not content to be content.

"Useless!" declared Jon the Joker. "Billions that are sorely needed elsewhere are poured into Eskom just to keep the lights on, while the cadres deployed there still refuse to make use of qualified people prepared to help. Can't do that; will screw up the quota stats. Add a R20 billion plus annual loss and too little income to cover debts. Who will pay? You and I. Households, business and industry. The electricity consumers of South Africa. Well, some of us.

"And then they appoint the chairman of the board as CEO. What? If you were an international investor, would you risk your money here? Right there is your R70 billion sell-off in six months from our markets.

"Meanwhile that giant power station in Mpumalanga is still not pumping a single watt into the grid. Kusile. Six generator units supposed to produce 800 megawatt each. All useless after eleven years of bungling."

"Same thing with education," frowned Bob the Book. "Billions spent; end results hardly literate. This will happen, of course, when the Shirkers' Union appoints the teachers. And nobody in government has the will to do anything about it."

"Don't expect the ANC to run the country," explained Irene the Queen, "they are far too busy plotting and scheming against each other. Ace Magashule and the Zuma Fighters against Cyril Ramaphosa and any hope of cleaner government."

"Speaking of government," said Luke the Dude, "what's up with the Public Destroyer, wotsername Busisiwe Mkhwebane? Coming out all fire and brimstone to get Cyril Ramaphosa, Pravin Gordhan and now even the new SARS boss, Edward Kieswetter? What do you think, Prof?" "Well, evidently she is a leading soldier in the fight-back campaign against the knights in shining armour who are deter-

mined to save the country from state capture and corruption," opined The Prof. "By choosing people like Ramaphosa, Gordhan and Kieswetter as targets, she makes no secret of what she is doing."

"That would be protecting the state capturers, right Prof?" enquired Luke.

"Correct," confirmed The Prof. "And these would allegedly be Jacob Zuma and the fight-backers who want his faction back in charge – Ace Magashule and Julius Malema's EFF in the frontline. There is a reason for the EFF being the noisiest defenders of the Public Protector's discredited findings."

"Just look at Magashule's slanderous tirade against ANC stalwart Derek Hanekom, who is a long-standing opponent of Zuma and campaigner against the rot that set in under his government," added Bob the Book. "The long knives are out. The ANC is foamingly divided against themselves."

"And while this is going on, what is the DA doing?" exclaimed Jon the Joker. "On the one hand they say the Public Protector is no good and should be fired now if not sooner, on the other hand their Mmusi Maimane complains to her about Ramaphosa – and harasses him when she makes, surprise surprise, fake-news findings against him. The head prefect explains his actions well, citing each tree correctly, but he is blind to the wood surrounding him. He has no understanding of the big picture."

"Do you really think the DA wants a return to the Zuma kleptocracy?" frowned Luke the Dude.

"Not the DA," consoled Jon the Joker, sort of. "Not the DA of Helen Zille, Tony Leon, Colin Eglin, Van Zyl Slabbert and Helen Suzman. But the DA of Mmusi Maimane and Jean-Claude van Damme? Who knows? Maybe he simply doesn't know what he's doing."

"Right, ladies and gentlemen," thundered The Governor, who was getting the suspicion that we were talking politics in the pub. "Time for another round. Angela, please do the honours."

"Getting back to Lucas's question," pondered The Prof while lighting his pipe, "Mkhwebane has been thoroughly disgraced as lawyer and Public Protector. The highest court in the land found that she doesn't know the law or her job, that she was dishonest and that she acted in bad faith. Even the minority decision found she got the law all wrong."

"Useless!" dismissed Jon the Joker.

"The information showing just how totally useless she is," informed Bob the Book, "was exposed by Jacques Pauw, writing in "Peega was a SARS investigator who was caught red-handed in a rhino hunt," continued Bob. "SARS dismissed him. He then wrote a dossier of wild stories and allegations about a James Bond-like world of dirty tricks and subterfuge, featuring what became known as the SARS 'rogue unit'. This he offered for sale to anyone who might be interested. The rogue unit fantasy got considerable traction, particularly in the Sunday Times, but Peega's dossier has since been thoroughly discredited. The three 'investigative reporters' who wrote the 'scoops' no longer work there."

"What does this have to do with the Public Dissembler?" worried Luke the Dude.

"Well timed, sir," nodded Bob the Book. "I now move to our Rasta friend Keletso Manyike. He also used to work at SARS, as an interpreter in the legal department, but evidently not satisfactorily as he was demoted. This upset Manyike so much that, in 1994, he submitted a complaint to Public Protector Thuli Madonsela. He attached Peega's dossier to his complaint.

"Madonsela referred him to the CCMA, where he also had no luck. She then approached SARS about the contents of the dossier. The taxman answered her questions and supplied supporting documen-

It's summer in the north and surprise, surprise, it's hot!

T is summer in the north of the planet, just as it is winter here. The planet tips as it goes around the sun and that is why it happens. They used to teach this in schools when I was a boy. Nowadays, one wonders if that is still the case, judging by the recent outpourings of climate doomsters.

It's the hottest European heatwave, since records began! It's all because of carbon dioxide emissions! See, we told you so! It's all the fault of the capitalists! 'Go green or die! Think of your grandchildren! And so on, and on, and on.

Every television channel broadcast from Europe or North America; every daily newspaper there and here is beating the drum of man-made (whoops, I should have written person-made. Whatever. Stuff it) climate change. It is getting even more ridiculous than usual on the climate change rhetorical front. Television presenters on CNN, Sky TV, the BBC (but not interestingly enough on channels broadcasting from

ON THE CONTRARY

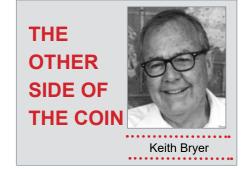


tation. This satisfied Madonsela and she closed the file.

"Some years later – here we are, Luke – Mkhwebane enters the picture. For reasons we can only guess, she digs up the dead file and sees Ha! Pravin Gordhan was head of SARS at that time. So she investigates, makes very nasty findings about Gordhan and gives Ramaphosa 30 days to punish him. Gordhan got an interdict against that and a court review is pending.

"And now our Rasta friend reappears, centre stage as an important witness lead-

Continued on P27



China or India) are competing with each other to find scary adjectives to describe perfectly natural weather events like, well, hot weather in summer in July in Europe, or anything else that can remotely be connected to the climate change hypothesis that modern economies are destroying the planet.

And whatever you read or see on the subject, I suggest that you stay sane, remain calm, question what you read and see, and get to know the difference between a scientific hypothesis (i.e. a theory yet to be proved) and a scientific fact.

Educate yourself. Don't be ashamed to admit you do not know the difference: thousands upon thousands, if not millions of highly educated people have bought into the theory. Across the dinner tables of the

the Sunday Times this time. It was the story of Keletso Manyike and, to a lesser extent, Michael Peega."

"Strangers boyo," dismissed Colin the Golfer. "Who are they?"

well-off in cities around the western world, the talk is of climate Armageddon.

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