



Eurolux still switched on

Dimmed results, but incandescent profits await.



5

SprayPave's new technology

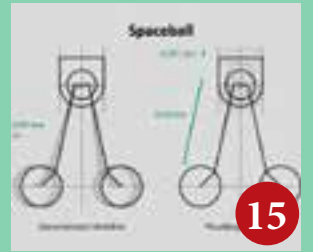
Quality bitumen ensures better roads.



7

New diesel outboard

Two cranks better than one?



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Table Bay Mall opens its doors



Western Cape Premier Helen Zille cuts the ribbon at the opening of Table Bay Mall as Adam Blow, Executive Director of Zenprop looks on.

In a ribbon-cutting ceremony on 28 September, the new Table Bay Mall, the latest regional shopping centre development of the property investment and development company, Zenprop Property Holdings (Pty) Ltd, commenced trading.

This flagship development aims to be a significant contributor to the economic development of both the West Coast region and the Western Cape Province. With an investment of over R1-billion by Zenprop, Table Bay Mall has already created 5 000 jobs during construction and an estimated 8 000 additional jobs are to be created (including tenants and service providers).

In her opening address, Western Cape Premier Helen Zille said: "The Western Cape Government welcomes the significant investment by Zenprop. Table Bay Mall will contribute to job creation and driving economic growth in the West Coast and surrounding regions. The West Coast is fast becoming an important economic hub. Our government continues to work to create a conducive environment which enables businesses to operate freely, with as little red tape as possible. We encourage everyone to access goods and services from the Table Bay Mall. By working together we can continue to drive much needed economic growth."

Covering 65 000m² and located on the corner of Berkshire Boulevard and the R27 (West Coast Road), Table Bay Mall also extends Zenprop's existing track record of energy-efficient and environmentally sustainable buildings.

The important natural resource preservation measures include water-saving devices which include two rainwater harvesting attenuation ponds where rainwater from the specially designed roof will be harvested and used for ablutions and irrigation. Any overflow from the ponds will be directed into the municipality's storm water channels.

Two boreholes were also installed to minimize municipal water usage. Other measures include metered usage, indigenous plants and rock gardens in non-public areas for current drought conditions and water-saving taps in restrooms.

"I would like to commend the owners and management of the Table Bay Mall for putting various technologies in place from the outset to lighten its impact on the environment," said Alan Winde, MEC of Economic Opportunities (responsible for agriculture, economic development and tourism). "These technologies, some of which are aimed at saving water, showcase their commitment to operating in a sustainable manner. Water conservation is all of our business, and private sector establishments like the Table Bay Mall are embracing innovation to drive us toward a new, more responsible, normal."

Other sustainability measures include:

- power-saving mechanisms that range from LED lighting and daylight harvesting through to skylights, which are also glazed to ensure a comfortable internal ambience; and

- recycling initiatives that see wet waste sent to a bio plant instead of overloaded landfills, wet and dry compactors on site, onsite sorting of refuse from tenants and sorters for plastic, paper, cans and glass.

Adam Blow, Executive Director of Zenprop said: "The Table Bay Mall development meets international excellence standards and caters for a wide variety of shoppers and income brackets. We have considered both the current and projected residential growth in the area to offer the customers of the West Coast the very best and latest South African retailers have to offer in a leading edge design."

Says Tim Harris, CEO of Wesgro: "Ventures like these are a critical catalyst for regional development and investment attraction. The Table Bay Mall is situated at the heart of a fast-growing economic hub, and we are confident will serve this community and visitors well for years to come."

Some of the technological innovations for shoppers include:

- **tap-to-pay parking** at exit booms meaning no queuing at pay stations;
- **digital wallpaper – video walls** surrounding lifts that showcase thematic and seasonal displays – a first in SA on this scale;
- **directional touch screens** to help shoppers find their desired store; and
- **fibre optics** for speedy Wi-Fi that is also free to all in the Mall.

Langa residents turn trash into cash



In just four days, Langa locals brought 5,2 tons of glass, 1,9 tons of paper, 1 ton of plastic and 295 kg of cans to the PACKA-CHING mobile buy-back service in their area and, in exchange, received R 5 403.32.

Spearheaded by Polycy and funded by its members, the PACKA-CHING project is being piloted in Langa with a goal is to divert at least 750 tons of packaging waste from landfill by increasing recycling within selected informal settlements and lower-income areas around Cape Town and Johannesburg.

Much of the waste that we see lying around is packaging material from household products, most of which is recyclable. PACKA-CHING presents an income earning opportunity, whereby everyday South Africans are encouraged to take part in recycling in order to improve their own lives, the community as a whole and the environment in which they live."

Brooke Kühne, PACKA-CHING Project Co-ordinator, explains: "The PACKA-CHING recycling trailer visits designated areas on specific days of the week to collect recyclable plastic, paper, metal cans and glass that has been collected and separated by community members. In exchange for these materials, they are rewarded with an amount of money determined by the current market price of each material type. The money is loaded onto their Kilorands Card™ (a special debit card) and can be spent at any shop that accepts MasterCard. By incentivising and encouraging community members to recycle and reduce waste pollution, we aim to positively change behaviour and shift the way in which people perceive recyclable packaging, in order to show them that waste has value."





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Big bucks for delayed Elandsfontein

NEWLY listed empowerment investment company African Rainbow Capital (ARC) – spearheaded by mining magnate Patrice Motsepe and former Sanlam boss Johan van Zyl – is backing the Elandsfontein phosphate mining venture on the West Coast.

But ARC might have to exercise some patience in garnering returns from this venture – which forms part of the group's broader 'food and agriculture sector' play along with stakes in Port Elizabeth-based farming services conglomerate BKB and agribusiness investor Acorn.

According to pre-listing documentation, ARC has snagged an

influential 25% stake in Elandsfontein. The cost of the investment was put at R506 million – but a subsequent valuation of R772 million underlines the longer term potential of the venture.

Elandsfontein is a subsidiary of Kropz SA, an explorer, mine developer and miner of fertilizer feed mineral deposits mostly in the form of phosphates.

The production is fed into sub-Saharan and international markets. Elandsfontein is South Africa's largest known sedimentary phosphate deposit, and the mine – currently under care and maintenance – is designed to produce approximately 1,35 million tons of

phosphate concentrate. Technically speaking, the Elandsfontein phosphate is regarded as high and consistent quality and is low in cadmium and other impurities.

The long term plan at Elandsfontein is to develop a vertically integrated fertilizer manufacturing capability producing a progressive range of plant nutrients for the sub-Saharan African agricultural industry.

Kropz already has dedicated warehousing, ship berthing and loading facilities at Saldanha, just 40 km from the mine.

While the long term prospects for Elandsfontein seem promising, ARC might have

to wait just a little longer to access the production prowess at the mine.

In mid-August Kropz took a decision to delay the commissioning of the phosphate mine "for an extended period".

According to a press statement, the delay was informed by a long delay in the issuing of the mine's water use license. This consequently impacted on the mine's ability to access suitable ore required to achieve target rock phosphate concentrate grade.

The situation has been further aggravated by technical issues identified during commissioning, and that current world rock phosphate prices have reached a 10-year low.

In fact, world rock phosphate prices have plunged by almost 30% since Elandsfontein was awarded its mining right.

Kropz said that during the delay mine dewatering would continue, allowing access to suitable ore. In addition, an independent technical team was being introduced to improve mining, processing and cost efficiencies in order to operate on a sustainable basis in the lower phosphate pricing environment.

Fortunately for Elandsfontein, ARC's Motsepe knows all too well the vagaries of starting (or, in this instance, re-starting) mining projects, while Van Zyl knows the value of patient capital.

Propak Cape to showcase latest products and innovation

ALL the latest international packaging trends will be on show at this year's Propak Cape trade exhibition, which takes place at the Cape Town International Conference Centre (CTICC) from 24-26 October.

Visitors will be able to see the latest advancements in machinery, equipment, products, materials and services offered by the packaging, food processing, plastics, printing and labelling industries. There will also be a focus on sustainability, eco-sensitivity and recycling in packaging. Expert advice from technical specialists will be on hand to find the right solutions for business growth.

Propak Cape will be showcasing the broad industry lifecycle from raw materials and processing to bottling,

packaging, plastics, printing, labelling, logistics, warehousing, recycling and waste management. Bringing wine and olive oil production and supply into the spotlight will be the newly-launched Wine and Olive Oil Production Expo which will be held alongside Propak Cape.

Visitors will have the opportunity to see the latest products being launched to market and to view machinery in action during live demonstrations.

Leading industry players at Propak Cape

Polyoak Packaging will introduce visitors to its newly formed Dairy-pack Cartons division, launched to push the boundaries of the standard "carton brick" by offering aseptic

packaging systems in innovative new shapes to customers across Southern Africa. The full system service includes fully integrated filling machines, multilayer packaging and matching closures, as well as the necessary downstream equipment for secondary packaging, to produce a finished product at the highest quality.

Pyrotec PackMark will be showcasing its newly-launched ultra-portable Anser U2 Mobile Hand-held Printer and the 9405 Continuous Inkjet (CIJ) coder from Markem-Imaje. Key executives from Markem-Imaje will be at the show to meet visitors and answer questions. The Anser U2 is a unique, versatile and lightweight printer, weighing in at a mere 1 kg and proving to be super easy to

handle and use on even the most tricky-to-print surfaces.

SMC Pneumatics will have a team of experts on their stand for visitors to learn more about their hygienic-design, washable components, corrosion-resistant materials, special seals, non-toxic materials and niche solutions. SMC recently expanded its local production offering to include the design and build of electro/pneumatic control panels for many industrial applications, which will be showcased at Propak Cape.

Some of the great features that will be showcased Tetra Pak's 'Future Ready' themed stand at Propak Cape include a "Food Island" and Customilkzation, an interactive video game tool that promotes customization using the latest technology and packaging options.

An exciting line-up of products will be on display at the Ishida Europe stand. The Ishida FFW (Fresh Food Weigher) series transfers the benefits of multihead weighing on sticky and fragile products such as fresh meat, poultry, seafood, dried fruits and coated fragile products. Also on show will be the Atlas iTPS™ Total Snack-food Packing System with packing speeds of up to 220 bpm for

extruded snacks and up to 150 bpm for potato chips. Also on display will be the new DACS-GN-SE economy checkweigher, the CHW-214 economical and reliable multi-head weigher, and the IX-GN-2443-S: high-performance X-ray inspection system.

J-Pak will be displaying its Linx Continuous Ink Jet 8900 Range and the Allen Coder Thermal Transfer Range at Propak Cape. There will be an X-Ray demonstration and presentation on the J-Pak stand at 12h00 on each day of the show. Visitors will also have the opportunity to enter the two competitions and stand a chance to win an Apple iPad Mini and a Smart Watch.

HG Molenaar will be showcasing their newest range of Thermal Transfer and Small Character Inkjet Coders at Propak Cape as well as the newest software compatibilities of the product range.

Ulma Packaging Systems will be exhibiting the ULMA TSA540 tray sealer (new in their traysealing range) capable of traysealing up to 30 packs per minute. Also on display will be the ULMA Superchik 60 – stretch wrapping at 60 packs per minute, as well as the ESPERA ES7001 price-weightlabeller – thermal print and apply at 120 labels

per minute, and the ULMA Florida E Flow Wrapper.

Other top exhibitor names at Propak Cape include Filmatic, Golden Era Printers, Acepak, USS Pactech, Multivac, Pail Pac, B.T Enterprises, Baypac, Festo, Greif-South Africa & Sub Saharan Africa, Chiorino South Africa and Fanuc South Africa, amongst many others.

Additional visitor attractions

The daily free-to-attend seminar programme will include an array of interesting topics covering plastics, packaging, processing, printing and wine and olive oil. The South African National Bottled Water Association (SAN-BWA) will also have a dedicated afternoon of enlightening talks on Wednesday 25 October. A bottled water market review will be presented by BMI and PETCO will engage the audience on how they are driving the transition to a circular economy in South Africa.

The Packaging Indaba will be running alongside Propak Cape on Tuesday 24 October. Industry in-

sights from across the packaging value chain will be highlighted in a comprehensive one day agenda. For more information, cost and booking details, visit the conference organisers website: www.vds-media.co.za

The Sustainability Pavilion will enable visitors to view the various industry initiatives that have been successfully implemented by the sector's Producer Responsibility Organisations. Many of South Africa's leading Associations will be amongst those exhibiting in the Sustainability Pavilion and industry experts will be available for discussion around sustainability, the environment, recycling and related issues.

Propak Cape is endorsed and supported by the Institute of Packaging South Africa (IPSA), Plastics SA, Printing SA, Packaging SA, the South African National Bottled Water Association (SAN-BWA), and the Italian SA Chamber of Trade and Industries (Italcham). The show is organised by Specialised Exhibitions Montgomery, a member of the Montgomery Group.



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Green Cross feels the pinch

CONSUMER products conglomerate AVI – which has ‘growing great brands’ as its corporate credo – is struggling to find an acceptable profit pace with Cape Town-based shoe specialist Green Cross.

AVI acquired Green Cross in mid-2012 for R382.5 million in a bid to extend its highly profitable premium branded footwear portfolio. It would seem the group – which owns household brands like Five Roses, Freshpak Rooibos, Bakers and I&J - initially had hoped to emulate the success enjoyed in acquiring top end footwear brand Spitz seven years earlier. The Spitz deal has paid off handsomely on recent years, and this footwear niche is now a major profit centre of AVI.

But Green Cross – best known for its com-

fortable shoes - has proved a difficult fit for AVI...so far.

In the year to end June Green Cross again disappointed with the business suffering from sustained discounting by competitors and lower wholesale demand. One positive in the trading period was that AVI CEO Simon Crutchley noted there was sales growth from “new doors” – the new retail store openings. But he did concede, in an investor presentation, that Green Cross would be a long term project.

AVI’s results showed sales up 9,5% at R372 million but operating profit slipping 1,8% to R26,8 million as margins crimped from 8% to 7,2%.

Crutchley said price increases at Green Cross were offset by lower wholesale vo-

lumes while revenue growth was hampered by pressure from a weaker Rand.

The Green Cross performance stood in contrast to the stylish performance from Spitz – which turned a 2% sales gain to R1,5 billion into a 6% gain at operating profit level at R320 million. The margin was a high-heeled 23%.

Looking ahead, Crutchley warned that Green Cross was likely to endure a constricted spending environment in the financial year ahead.

But he said there would be an improved range to attract a new, younger Green Cross customer as well as stronger marketing execution in-store and traditional media formats.

Crutchley also expected benefits to flow

from increased retail space and store tiering initiatives aimed at widening the customer base.

There would also be a continued growth of retail space and revenue.

Ultimately, profitability at Green Cross is expected to improve in the new financial year as retail trading densities improve and new doors are opened.

But AVI still decided to provide for a hefty after tax impairment of R108 million against the Green Cross trademark. This is in recognition of the longer period required to grow the business to

its target profitability.

It is, however, heartening that AVI looks determined to keep Green Cross on the front foot in the 2018 financial year. New store openings are contemplated against the backdrop of a 42-strong retail chain at the end of June that increased sales to R275m (last year: R238m) despite trading densities dropping off slightly to R55 800/m² from R56 500/m². But on a ‘like-for-like’ comparative basis trading densities (based on 31 stores) edged up to R62 150 per square metre from R59 380/m² in 2016.



Smart terminal automation manages largest LPG terminal



LOCATED in the port of Saldanha Bay, Sunrise Energy was established in 2007 to develop and construct an LPG Terminal. The company’s vision is to import much-needed LPG in significant quantities, which in turn will boost regional energy security and increase competition, to the benefit of consumers and the provincial and national economies. Sunrise Energy own and operate the world class facility which can be used by any legitimate gas importer, distributor or downstream user for the import of LPG, commercial propane or Butane, subject to maximum throughput and storage tariffs which are set and regulated by the National Energy Regulator of SA.

Designed in a modular way to respond to growth in demand, the

terminal has a total storage capacity (in its first phase) of 5 500t of LPG, allowing an annual throughput of almost 200 000t. The first shipments of LPG were successfully discharged in May 2017.

As the preferred automation vendor, Yokogawa was selected to design, supply and commission the Integrated Control and Safety System (ICSS) based on Yokogawa’s Centum DCS and Pro-Safe SIS platforms, and the overall Terminal Management System. Yokogawa’s Terminal Management System, Terminal Logistic Suite VP (TLSVP), was designed and developed to meet the exacting operational demands and logistic needs in terminals. The platform can perform everything from ship unloading to tanker

truck, rail car loading and pipeline operations, inventory management, master data management, security control, audit trail, and other movement operations such as tank-to-tank transfers and blending. Moreover, truck management, product tracking and jetty scheduling are additional features that support customer terminal operations efficiently. TLSVP is applicable to all industries including oil, LNG, LPG, chemical and petrochemical terminals worldwide.

This facility is the first of its kind in South Africa. Through the deployment of Yokogawa’s experienced engineering resources, the project was successfully delivered to ensure Sunrise Energy to provide accurate mass balances and efficient terminal operations.

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The Eternal Battle - Safety vs Productivity

THERE is only one fight bigger than May-weather vs McGregor, and that's Safety versus Productivity. A monumental battle fought each and every day across the globe, says John Valentine, Director at Real Telematics.

The outcome on each site is determined by whom has the larger clout in the organisation, SHEQ or Operations. SHEQ wants adherence to speed limits and safe practices and operations wants loads dispatched and racked as quickly and cheaply as possible. A conundrum for the ages if you cannot get the balance just right.

Luckily FMX does not choose sides. The premier product in Forklift Asset Management, FMX simply provides BOTH parties with what they want. FMX can limit and alert on speed, as well as identify culprits. But it can also show Run Hours and the type of productivity in those times to identify waste and peak periods. This can help Fleet Managers determine if they have too many or too few machines and/or dri-vers and adapt accordingly.

Of course this does not change the perception and any driver/operator will tell you

top speed achieves top loads.

We beg to differ. The analytics tell us that Speed is the number one cause of impacts, leading to increased shrinkage and other associated costs. Analytics also tell us that the operator that moves the most pallets is often having more impacts than anyone else. It's great that so many pallets were moved but how many pallets were damaged in the process - or the machine? A top productive month is something that should be celebrated, not brought down by the extra costs draining the mainte-

nance budget.

Scooping pallets is quite common.

Approaching the pallet and lifting it in one motion, rather than stopping and then engaging. Arguably the biggest reason for pallet deposits being lost.

The challenge will remain long after most of us are dust. It really boils down to having enough accurate data to be able to draw conclusions that enable an effective balance, and that's where FMX excels. Answer the question for yourself and fit FMX before the bell tolls for Round 11 and you have to hug again.

Witlof root may hold the key to local inulin production

ALTHOUGH the Witlof root will only produce a chicon once in its lifetime, it may also hold the key to a rich supply of inulin, a natural ingredient touted for its medicinal benefits and uses in the confectionery industry as a sugar substitute.

According to Dr Motlalepula Matsabisa, Director Pharmacology at University of the Free State, inulin, a pre-biotic, currently imported at great cost, may play an effective role in managing diabetes. The university is also currently researching the impact of inulin on cancer cells as it is also believed that it might

have a retarding effect on tumour growth. Matsabisa contacted Ceres Witlof grower Fanie van der Merwe of Bronaar Farm about using the roots for research purposes and possible commercial production of inulin. Matsabisa who adds that inulin has many applications in the pharmaceutical, food such as confectionery, baby foods, iced cream etc. industries for example, that it also gives baked foods like breads that rich mouthfeel.

Van der Merwe says that apart from inulin, Witlof is also very high in folate, a water-soluble B-vitamin that is known for many health benefits



including assisting with pregnancy and is one of the most versatile vegetables that can be enjoyed raw and cooked.

In South Africa Witlof is available 12 months of the year at select delis and supermarkets such as Checkers, Food Lover's and Woolworths.

Eazi Access rental solutions result in productivity gains

IN a tough economic climate, the decision to rent rather than buy expensive machinery can be the best one for some businesses: there's no drain on your capital, nor are there myriad variable costs that are difficult to budget for e.g. spare parts, repairs, testing, specialist services for maintenance, and so on.

"With a rental arrangement, you know what you're in for – or at least, you should," says Tony Chandler, Regional General Manager at Eazi Access. "You should be confident you'll get the service you need from a supplier you can rely on."

Eazi Access provides work-at-height and materials-handling

solutions to customers in the light industrial, construction, entertainment, mining and heavy industrial sectors. Its "one-stop" suite of offerings incorporates rental, sales, service and training. It has the widest range of equipment in Africa, sourced from leading international manufacturers including JLG, Magni

and Maeda for which Eazi is the sole distributor in Africa.

Chandler says Eazi Access is not a conventional rental business, as it goes beyond a simple hiring arrangement to develop solutions that add value to its customers. This includes anything from renting equipment tailored to a particular site

specification to providing site supervisors, and training and supplying operators. "We also sell machinery where this makes sense to the customer," he says.

Eazi Access' rental solutions are designed to deliver gains in three key areas: cost savings, productivity gains and safety improvements. "Our solutions can offer incredible cost-saving opportunities when compared with conventional methods for working-at-height," says Chandler. "They also enable productivity gains, for example, we can get an operator to a height of 10 metres in just 30 seconds."

Because every minute on site needs to be maximised for productivity, it's vital to use the right equipment for the job and resolve any issues that may arise quickly and effectively. An advantage of renting is that it's easy to switch to a different machine in the event of changes to operations or production. To ensure maximum uptime, all Eazi Access machines undergo scheduled maintenance and load testing in line with original equipment manufacturer (OEM) specifications and industry regulations. Eazi Access also has the largest stock of spare parts in Africa, ensur-

ing short turnaround times for replacements or repairs. There is an exchange policy for machines that can't be repaired within 24 hours.

The most important element of any solution, Chandler stresses, is safety. He cites the example of a petrochemical company that's maintained a track record of 10 years of non-recordable cases (no serious injuries from working-at-height) since using cherry pickers and MEWPS – well above the industry standard.

"There are no compromises when it comes to the safety of our operators and everyone else on site," he concludes.

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Eurolux still switched on

PROSPECTS for local economic growth have dimmed markedly over the last 18 months – but Milnerton-based lighting specialist Eurolux still looks capable of incandescent profits.

The recently released year to end June results of majority shareholders ARB Holdings shows Eurolux managing a slender increase in turnover to R511m and only a slight 3% decrease in profits to R58m after margins were squeezed down to 11.3% (previously 11.7%).

The performance, in isolation, may not appear spectacular. But seen in context of a dour trading environment and increased competitive pressures Eurolux – spearheaded by well know Cape Town businessmen Peter Willigh, Steve Palframan and Shane Bouchier – has done remarkable well.

For illustrative purposes, one of Eurolux's major rivals Radiant Lighting – which has a major showroom in Cape Town – saw turnover in the six months to end June down by R20m to R142m and operating losses deepen to over R10m.

ARB CEO Billy Neasham said Eurplux was adversely affected by the decline in retail sales – especially in the second period of the financial year, when the South African economy entered a recession. "This division felt the impact of the decline in consumer spending at the retail stores, its primary customers, while the improvement in the Rand/\$ exchange rate necessitated a reduction in pricing of its products to its customers."

But Neasham noted that trading margins had been maintained despite the volatile exchange rate and the competitive trading environment.

He added that Eurolux's new warehouse for the distribution of an extended product range had resulted in increased operating costs.

ARB's results presentation showed that Eurolux continued to notch up market share gains through product expansion. There had been a successful targeting of electrical wholesalers.

Looking ahead, Neasham said Eurolux would continue its strategy of growing market share and introducing new product ranges to its existing customer base.

"Furthermore, the new Euro Nouveau range and project lighting segment are expected to show growth in the new (financial) year."

Another development in the Cape Town

lighting sector that will be worth monitoring is the takeover of Eagle Lighting by the might industrial conglomerate Bidvest earlier this year.

Eagle Lighting – established in 1924 – is one of the best known lighting businesses in the Western Cape. The company has seven

stores in the Western Cape – including a new showroom in George. The five Eagle Superstores host over 1 000 m² of showrooms per store.

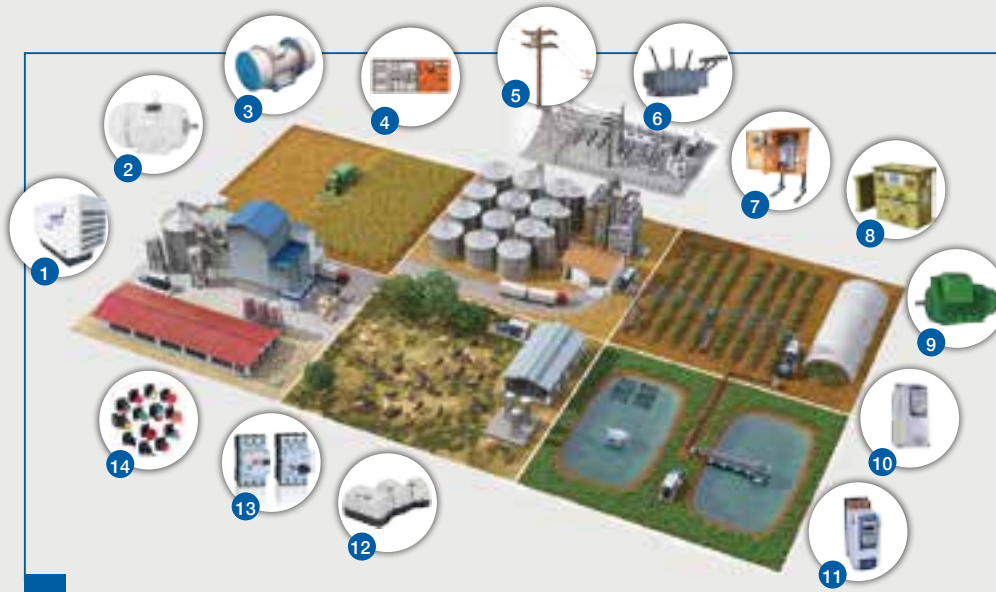
Eagle Lighting has been slotted into Bidvest's Voltex Lighting Group. Although Eagle – according to an official communication

- will continue to be run independently, there is considerable advantage in being plugged into the financial muscle and business acumen of the Bidvest group.

Eagle has already confirmed it is "definitely" looking at expanding its footprint in South Africa and neigh-

bouring countries over the next couple of years.

Eagle's newsletter noted: "With being in the Voltex Group I am sure that we would be able to offer our clients a far better range of light fittings at better prices going forward due to the bigger buying power of the group."



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A record maize season but the weather is still concerning in parts

SOUTH Africa has kept to all prior predictions and has registered a record harvest season with the total grain and oilseed crop of 18,91 million tons, which is up 101% year-on-year. The estimate for the maize crop in particular came in at an all-time high of 16,41 million tons, which is comprised of 59% yellow and 41% white maize.

The winter rains however have not retained the momentum; The Western Cape is still grappling with persistent drought conditions.

"Weather is critical for price direction going forward with the Western Cape still not out of the woods and the rainfall outlook still pointing to minimal rainfall for the wheat areas in South Africa. The crop has entered a critical stage of development and more moisture is needed for a good crop," says Paul



Makube, Agricultural Economist at FNB.

The short term rainfall outlook shows limited chance of receiving rain in the grain areas in South Africa. The medium outlook shows an improvement in the rainfall expectations, particularly for Mpumalanga and KZN whose optimal planting dates for maize are fast approaching from the 1st October to the 15th and 30th of November respectively.

That said, all indications are that we are

likely to have a largely normal rainfall season as the El-Nino prospects that had been noted at the beginning of the year have diminished.

"Apart from the Western Cape water crisis, we still expect a normal rainfall pattern for the rest of the country and therefore there should not be major worries about the late onset of summer rains this year. The season is off to a slow start, but we should see a far more normal season this year," concludes Makube.

SA's #1 petrol brand

FOR a record breaking seventh consecutive year, consumers have backed Engen as their favourite petrol station in the country, reaffirming the company's uncontested brand leadership and market strength in the South African petroleum industry.

The accolade was attributed to Engen in the Sunday Times Top Brands* survey, which recognises those brands that have earned top consumer sentiment in South Africa over the past 12 months.

While Engen continues to have the largest service station footprint in South Africa, operating over 1 000 sites, it has been the company's constant innovation and customer service focus that have placed it ahead of the pack in brand recognition and loyalty across all audiences.

"We continue to focus on consistently reinvigorating the Engen brand and investing much effort into remaining an attractive destination for our customers' convenience needs. It is therefore important for Engen to move into relevant and innovative spaces where it can engage cus-

tomers and interact with them meaningfully," comments Seelan Naidoo, Engen's General Manager: Retail.

Naidoo also notes that just over 1 in every 4 litres of petrol purchased in SA is from Engen with 131 million customer visits to Engen forecourts in 2016.

Added to this, the company is also firmly committed to transformation.

"Our B-BBEE level has moved up from a level 8 to level 2, whilst 46% of our service stations are currently black-owned. Last year we invested R28 million on our many CSI initiatives and spent over R674 million on supplier development and a further R47,2 million on Enterprise Development," adds Naidoo.

In order to remain on at the forefront of fuel technology, Engen recently launched a new advanced energy formula, Engen Primax Unleaded. This was in answer to motorists' calls for petrol that provides both superior performance and fuel economy.

"In developing our next generation fuel, we



Tsholo Tiro from Engen receives the Top Brands award for the 7th consecutive year.

commissioned research into the South African fuels market to ascertain what really matters to our petrol customers," says Naidoo. "Our reformulated Engen Primax Unleaded provides our motorists with technology that cleans the engine, enhances fuel combustion, and improves drivability. All these features contribute towards providing superior performance and fuel economy compared to previous formulations."

"We are honoured to once again receive this award and want to thank our customers for choosing Engen. South African motorists and consumers can be assured that we will continue to strive to provide them with the best service, the best value and the best offerings," concludes Naidoo.

* Sunday Times Top Brands Awards is commissioned by Avusa Media and conducted by TNS Research Surveys

Record numbers of volunteers participate in 2017 International Coastal Clean-Up Day

THIS is the 21st year in which South Africa participated in the International Coastal Clean-Up (ICC) – an annual event that has become the biggest, global volunteer effort for ocean health.

"We coordinated more than 400 beach clean-up points around the Cape and 40 in KZN in partnership with the KZN Marine Waste Network members on Saturday alone. This excludes the various clean-ups that took place during the course of last week as part of our "Clean-Up and Recycle SA Week" and inland clean-ups that were held at rivers and streams," said Douw Steyn, Sustainability Director for Plastics|SA.

Despite inclement weather experienced in Cape Town on the day, Steyn suggested that 2017 would be remembered for having one of the best turn-outs of volunteers who freely offered up their time to participate in picking up litter from our beaches.

"We will only have the official stats of the amount and type of litter collected later this year once all the audit sheets have been compiled and analysed, but we can definitely say that we



Clean-up volunteers on Robben Island.

saw an increase in the number of community groups, schools and businesses who participated in this year's ICC," he said.

Although extensive education and communication campaigns have been taking place over the past few years, volunteers agreed that they were shocked to see how much litter is still found on our country's beaches. Packaging continues to be a major culprit and items such as straws, sweet wrappers, chips packets, earbuds and cigarette butts were found strewn across our coastlines.

"Approximately 75% of ocean litter is derived from land based waste. Without effective waste collection, an avalanche of debris

enters the ocean. Even a packet that is carelessly thrown out of a car window thousands of kilometres inland, could eventually find its way to the ocean. We need to address the importance of an effective waste management system upstream and increase our efforts to educate the public about the importance of recycling. Plastics is not the problem. People not discarding their used plastics products properly or ensuring it gets recycled, is the issue that needs to be addressed," Steyn advocated.

"Effective methods for separation-at-source and the collection of recyclable materials are vital if we are to find a long-term and workable solution. To this end, we invite

industry bodies, government and communities to work together with us as we count down to the World Clean-Up Day that will take place next year on the 15th of September as part of the global "Let's Do It" Campaign*. This worldwide wave of clean-ups will start in New Zealand and follow the sun through 24 time zones, ending 36 hours later in Hawaii. Volunteers from more than 150 countries will join the world's biggest positive civic collaboration in the fight against illegal waste.

"Our sincere thanks to everyone involved in this year's activities who helped to make a difference in their environment. Without the support of our many sponsors and the help of every volunteer, we would not have been able to collect the large amount of litter that we did. We are busy writing a success story that shows what can be accomplished through teamwork and a commitment to save the environment for future generations," Steyn concluded.

For more information about the 2017 International Coastal Clean-Up, visit www.cleanupandrecycle.co.za or www.plasticsinfo.co.za

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New technology assures bitumen quality for SA roads

SPRAYPAVE has acquired technology new to the African continent that aims to resolve the shortage of high grade bitumen for asphalt production.

SprayPave, a leading manufacturer and supplier of bitumen, modified binders and emulsions for road construction, has procured a multistage bitumen converter that changes bituminous products from one grade to another. This enables SprayPave to enhance the penetration grades of bitumen required to produce asphalt.

The 20 t/h multistage bitumen converter was acquired from Technix Industries in New Zealand, a company that has been in the bitumen business for over 100 years and is a global leader in bitumen technologies. Spraypave's licencing agreement with Technix covers support, all process improvements, analysis as well as trouble shooting problems.

The unit, located at SprayPave's Cape Town plant, is the second to be commissioned worldwide after Fiji.

"We can now achieve predictable and repeatable conversion of penetration grade bitumen available from South African refineries to grades that are both lower in penetration and higher in softening point than the feedstock bitumen," says Eddie Jansen van Vuuren, general manager of SprayPave.

SABS certification

"Following several months of testing, we are delighted to have received SABS test results which show that 50/70 produced conforms to the SANS 4001-BT1 specification."

Bitumen is an essential component of asphalt as a binder. It is produced by refiner-



ies as a by-product of crude oil, but can only be supplied in broad grade ranges that seldom meet asphalt design specifications.

The multistage bitumen converter uses pressure, heat and air to precisely convert bituminous refinery feedstocks into superior quality bitumen. The softness, penetration index and physical properties of the bitumen can be changed to meet exact design specifications.

Jansen van Vuuren points out that this technology addresses current and future issues around local bitumen supply, particularly in regions such as the Western Cape where refineries are unable to provide suitable penetration grades of bitumen for road binders. The converter can modify 70/100 penetration grade bitumen to 50/70

or even 10/20, which is required for new high modulus asphalt designs."

Multigrade bitumen

With certain chemical additives the converter can also produce multigrade bitumen with specifications and performance characteristics spanning several penetration grades. "This is particularly significant as it will help manufacturers to comply with the new Performance Grade (PG) bitumen specifications in South Africa," he says.

These specifications aim to improve the assessment of deformation resistance, fatigue properties, long term performance and cracking potential of bitumen as an asphalt binder.

By enhancing bitumen penetration

grades, the multistage bitumen converter can help asphalt producers to ensure they are using multigrade bitumen products complying with the PG specifications. Spraypave hopes to increase the footprint of the technology by installing more multigrade bitumen converters in strategic locations in Southern Africa to help meet the need for rapid infrastructure development.

Precision over long distances with Leuze

LEUZE distance sensors have a solid reputation for maximum accuracy over both small and large distances. These sensors are used everywhere geometric parameters such as height or width need to be determined and are characterised by high resolving capacity at high measurement rates.

The Leuze ODSL 30 is capable of measuring distances on black objects up to 30 metres away and on bright objects that are as far as 65 metres away. The sensor resolution of 1 mm facilitates highly accurate measurements with an accuracy ratio of +/-2 mm over the complete measurement range.

By automatic adjustment of the exposure time to the intensity of light, independence from the reflectivity properties of an object can be achieved further ensuring the accuracy of the measurement values. The unit also



The Leuze ODSL 30 is capable of measuring distances on black objects up to 30 metres away and on bright objects that are as far as 65 metres away.

has a referencing function which prevents fluctuations in measurement value.

The unit is equipped with an integrated display which shows the measurement values and this allows the sensor to be easily adapted to the measurement application at hand.

The Leuze ODSL 30 has an integral key pad with an LCD display and the unit interfaces with analogue outputs,

serial RS 232/485 interfaces and teachable switching outputs.

It is available from Countpulse Controls, leading southern African sensing solutions company. With more than 35 years of experience on the continent the company offers a wide range of sensing solution for all industries and is able to assist customer in appropriate selection of the best fit for an application.



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ated with chain-driven conveyors.

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air pressure is low, pressure sensor is off, or an arc occurs, simply clear condition and hit reset to clear

- Low flow rates, flow rate controlled, saving costs on materials used
- Minimal overspray creates a safer, cleaner, work environment

Features and benefits

- Nozzles can provide constant spray or be cycled to spray when needed
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- Pressure sensor inputs for monitoring nozzle pressure
- Trigger input for sensing the presence of a target
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- Reduces system downtime, system will monitor if oil/materials are low, if

How does electrostatic spray coating work?

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The new TankJet 78 tank cleaner provides more than 30 times the cleaning power of fixed spray balls and ten times the impact of most rotary spray balls to ensure fast, efficient and thorough cleaning of tanks up to 45' (13.7 m) in dia. Providing 360° coverage of tank interiors, the unit is ideal for CIP in sanitary applications. It features a threadless, crevice-free and self-cleaning design in compliance with the 3-A Sanitary Standard 78-01.

THREADLESS DESIGN ENABLES FAST AND EASY MAINTENANCE IN MINUTES - NO TOOLS REQUIRED

The patent-pending TankJet 78 is the only multi-axis rotating tank cleaner available that can be serviced without tools. It takes less than five minutes to disassemble, perform a few simple maintenance steps and reassemble the unit. And, since the unit is self-cleaning and self-draining, maintenance requirements are minimal.

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Competitive pricing for genuine parts boosts growth

CUMMINS is increasing its market share for CMI genuine parts by leveraging its engine-parts pricing policy. The strategy has focused on promoting the use of genuine parts through flexible product bundles, simplified prices and discounts, and easier ordering and delivery.

Cummins Product & Pricing Manager Marco Gouveia explains that customers have become more price-sensitive due to the current macro-economic climate. "The large Cummins engine population in the marketplace has attracted will-fit competitors chasing this aftermarket business. The challenge is compounded by global non-genuine and counterfeit parts."

The aim of the new strategy is twofold: to obtain a market-based overview of aftermarket parts pricing for each engine category and product component, and to ensure logical and rational prices for customers that are easy to interpret and explain.

"This will ensure that our pricing is easier to manage and review, and for us to be able to respond to market conditions, forex variation and product lifecycle. The end result will be improved pricing reviews and controls," Gouveia comments.

Apart from punting the benefits of genuine versus non-genuine components, the strategy is also aimed at promoting Cummins ReCon. A countrywide campaign entitled 'The Redefining Tour' has promoted the major benefits of the new strategy for customers.

"The tour has allowed us to connect with our customers and deliver our programme directly to them. It has also afforded us the

opportunity to receive their feedback firsthand," Cummins EBU Parts Leader Mornay Annandale comments. Customers can increase their savings when bundling qualifying parts and repair kits for overhaul, thereby receiving additional

discounts. Midrange, HD Legacy and ISX parts are all included.

"We have seen an increase in HMLD (Heavy Medium and Light Duty) business," Gouveia confirms. Year-on-year sales have grown by 15% (17% in MidRange and

14% growth in Heavy Duty), on the back of strong sales in the automotive segment through ISX dealers.

Annandale highlights that the initial response from customers has been positive, as evidenced by the sales surge through the

DBU outlets. "Subsequent follow-up visits conducted with customers have all been received positively." Gouveia concludes that this positive outcome bodes well for rolling out the pricing strategy to other Cummins territories in Africa.



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The Montreal Protocol and the phasing out of HCFCs

OVER the years, numerous types of gases have been used for multiple purposes. The constant development from one gas to the other has, in turn, exposed the environment to multiple chemicals that have placed the Ozone layer in danger. Due to this, on September 16th, 1987, over 197 Countries agreed on a treaty that was designed to restore the Ozone layer. As per this treaty, the production of numerous Ozone Depleting Substance (ODS) has been phased out. One of the substances to be phased out is the popular hydro chlorofluorocarbon

(HCFC) gas Chlorodifluoromethane, commonly known as R-22, also called HCFC-22

The phase out of R-22

R-22 is a colourless gas commonly used as a refrigerant and propellant for air-conditioning, heat pumps and refrigeration. This gas is widespread mainly because of its low-cost, availability and effectiveness. R-22 or HCFC-22 has been a favoured refrigerant since the 1960s. However, R-22 has been reviewed due to its impact on the Ozone

layer, it is classified as a greenhouse gas that contributes to Global warming and is used in several blends which contribute significantly to global warming. In addition, the release of R22 through leaks in systems also damages the Ozone.

What this means for Air-conditioning and refrigeration

On the 22nd June 2017, Michael Labacher at a training session conducted by SARACCA (South African Qualification and Certification Committee) at the Air Conditioning And

Refrigeration Academy (ACRA) spoke of the national decrease of R22 importation, since 2015, all South African companies have been facing a constant decrease in the importation of R22, a complete phase-out is estimated by the year 2040. South Africa is well in the lead in the phasing out of HCFC's as the 2013 baseline of 3 163 tons was long surpassed in 2016 when only 2 673 tons were imported and just 2 556 consumed.

This means Air conditioning and refrigerating practitioners now have to use alternative refrigerants.

South Africa is an innovative promoter of CO₂ refrigeration alongside all European countries, Japan and Australia.

There has been a ban on R22 charged systems that are assembled from scratch in South Africa since January 2015, from components assembled

to form a complete system. The regulations on the Government Gazette 37621 of May 2014 dub it illegal for stockpiles of R22 to be stored for a period exceeding 18 months. Companies that have stockpiles are required to register them with the Department of Environmental Affairs

and submit a plan as to how the stockpiles are disposed of.

As a result of the Montreal Protocol, the Ozone hole discovered in Antarctica is gradually recovering and climate projections say between the year 2050 and 2070 the Ozone layer will return to 1980 levels.

Helping hand for teenage girls

CONSULTING engineering firm UWP Consulting chose Women's month – August 2017 – to launch an initiative that has the potential to change the lives of many hundreds of marginalised teenage schoolgirls.

The initiative, known as *Nurture a Girl*, kicked off in Cape Town with an event at Garlandale High School in Athlone.

“We live in a patriarchal society where young women have very little voice, where violence against girls and women of all ages has reached epidemic proportions. How, then, do we expect teenage girls to excel at school and enter meaningful careers?” asks Nonkululeko Sindane, CEO of UWP Consulting and a passionate advocate for women's rights.

The *Nurture a Girl* initiative will reach into communities throughout UWP's office network in South Africa and the Cape Town launch was followed by events at secondary schools in King Williams Town in the Eastern Cape, as well as Mamelodi and Tembisa in Gauteng. A school in Richards Bay is also participating.

In the first phase of the project UWP is sponsoring 50 female learners in need of support at the selected high schools for a year. Two are special needs schools.

The beneficiaries have received personal hygiene kits containing all the items that teenage girls should have. They are being given structured



At Garlandale High School (from left): Nonkululeko Sindane (CEO of UWP Consulting) with Nurture a Girl beneficiaries Shanaaz Chamwaita and Zainuneesa Lakay.

opportunities to attend workshops and presentations, receive career advice and mentorship, and to learn basic skills over the year.

The value of the annual sponsorship is R1 050 per beneficiary, but its real value lies in mentoring, ongoing opportunities and life skills.

“We are inviting other companies and individuals to come on board and help us expand the programme,” says Nonkululeko Sindane. “Just one girl sponsored is one more opportunity for a better future, one more chance to give a teenager the strength, courage and advice to get a good education and make a difference in the world.”

Already this call has been heeded, with 62 girls now involved in the programme

thanks to sponsorships received from others and further growth expected.

It is not only the beneficiaries of the *Nurture a Girl* initiative who benefit, but their schools as well. The programme organised by UWP at Garlandale School in August included a morning of addresses for the whole school by a motivational speaker as well as professionals on drug use, counselling and psychometric services, health and hygiene.

“We chose Garlandale as it is a school that achieves a good matric pass rate despite most of its learners coming from underprivileged areas of the Cape Flats where crime and poverty are part of their daily lives,” says Nerissa Ventura of UWP Consulting Cape Town.

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Support for Atlantis SEZ will boost investment and job creation

THE City of Cape Town, the Western Cape Government and GreenCape welcomes the notice to designate Atlantis a Special Economic Zone (SEZ) by the Minister of Trade and Industry, Dr Rob Davies.

The notice to designate a total land area of 124,5 hectares of land in Atlantis as an SEZ was published in a Government Gazette on Friday, 8 September 2017.

The land area of the SEZ is situated in the Atlantis industrial area north of Cape Town, south of Wesfleur, east of Dassenberg Road and west of the Witsand community.

Members of the public could submit their comments or objections to the notice by 8 October 2017.

The notice provided the public with opportunity to provide inputs to the dti. Following the public comment period of 30 days, questions and answers on the application will be reviewed and finally submitted to Minister Davies to table at Cabinet.

The declaration of Atlantis as an SEZ is a declaration to the people of Atlantis and surrounding areas that government is serious about economic, social development and job creation in the area.

The City identified an opportunity to establish a GreenTech hub that would tap into growing global GreenTech market opportunities while addressing unemployment challenges in Atlantis.

Based on that vision, the City designed a land disposal process for GreenTech that understood investors requirements to be able to access land swiftly.

To date, the City's efforts towards its vision for a GreenTech hub include; providing land as a greentech industrial park to support the revitalization of Atlantis as a strategic development node and providing incentives for investors across financial and nonfinancial.

Incentives provided by the City to attract investment includes fast-tracking land use and building plans, a reduced electricity tariff,

providing exemption of application fees for land and building plans and debt write offs to businesses that meet employment targets.

Further investment by the City included infrastructure upgrades with roads, the MyCiti route, electricity and installation of fibre optic cables."

Atlantis has already attracted major investment to the tune of R680 million while the revival expected in the area as a result of the SEZ status will present massive opportunities for companies who invest in the area.

Some of the investment to date includes:

- Five investors are operational in the proposed zone (totalling approximately R680m in investment)
- Two further investors are in advanced stages of negotiation with the City to lease the land;
- R1,8 bn in investment anticipated before 2022 creating about 1 200 direct jobs.

Clean-up, recycle and win!

SCHOOLS around the country stand a chance to once again win big prizes in Plastics|SA's annual schools competition, entitled "Let's do it ... Let's Clean-Up South Africa!"

According to Douw Steyn, Director: Sustainability at Plastics|SA: the aim of this national competition is to educate and encourage schools, communities, businesses and organisations to play their part in cleaning up their immediate surroundings.

"We have been running this national competition for the past 10 years as part of our annual Clean-up and Recycle SA activities.

During this time, we have given away prizes to deserving schools for hosting various clean-up activities and being committed recyclers of their waste," Steyn says.

The competition is open to primary and high schools as well as businesses or organisations around the country who are eager to initiate a clean-up and/or recycling activity in their area. By writing a short report about their clean-up and recycling, and sending in the photographs and information of what they had managed to accomplish, they stand a chance to win one of the exciting prizes as per the table below.

Entries for last year's competition were received from around South Africa and were judged based on how many participants were involved in their respective projects and whether they managed to involve their community. Kabega Primary in Port Elizabeth was announced as the ultimate winner for proving their mettle as a group of learners committed to sustainability and cleaning up their environment based on the amount of recycling and other environmental and sustainability activities they were involved in.

The closing date for this year's competition is 31 October

2017. Entry forms and competition rules can be downloaded from www.cleanupandrecycle.co.za/competition. Entries will be judged during the first week of November and the winners will be announced shortly thereafter.

"We look forward to seeing new schools enter the competition this year and proving their worth as our eco-warriors of the future. There is wealth in waste and we want as many schools as possible to benefit from this competition that teaches pupils the importance of looking after their environment, whilst at the same time benefitting the school and their community," Steyn concludes.

Prizes	1st	2nd	3rd
Primary School	R5 000	R2 000	R1 000
High School	R5 000	R2 000	R1 000
School: Primary & High	6 Seater Picnic Table	Garden Bench	Plastic Recycle Bin
Business/ Organisation	6 Seater Picnic Table	Garden Bench	Plastic Recycle Bin

WATER RESTRICTIONS LEVEL 5

Almost one in two Capetonians are active water savers. The City of Cape Town thanks you!

However water usage has not declined in the commercial sector. Level 5 restrictions are now in place.

Businesses must reduce water usage by at least 20% or face penalties. Saving water is vital during this drought.

Use less than 87 litres of municipal drinking water per person, per day - at home, work or even at the gym.



Drought crisis: adjust that stopcock!

DAM storage levels are currently at 34,2% with useable water at 24,2%. Collective consumption is at 599 million litres of water per day. This is 99 million litres above the target of 500 million litres.

Consumption must be brought down to 500 million litres of water per day to help Cape Town to get through as much of the summer as possible, towards winter 2018.

Reducing consumption still remains absolutely vital.

The City reminds residents to reduce water flow on their property through adjusting their private stopcocks or water control taps.

How to adjust a stopcock to reduce water flow (this should ideally be done during the day):

- Close the stopcock by turning it in a clockwise direction, and open it again (about a half turn)
- Go to the tap furthest away from the stopcock (this could



be inside the house, in the back garden/yard or in an upstairs bathroom)

- Open the cold water tap and see if there is sufficient water flowing
- If required, adjust the stopcock a half turn at a time until a reasonable but reduced flow rate of water to the furthest cold water tap is achieved

For information on how to meet the 87-litre per day usage requirement, residents should please visit the water restrictions page on the City's website: www.capetown.gov.za/thinkwater

petown.gov.za/thinkwater and utilise our water calculator: <http://bit.ly/ThinkWaterCalculatorCT>

Residents can contact the City via email to water@capetown.gov.za for queries about the water pressure reduction, or to report contraventions of the water restrictions (evidence should be provided to assist the City's enforcement efforts), or they can send an SMS to 31373.

Water supplied by the City remains safe to drink and is tested in accordance with safety standards.

Forging future architects

dhk has kicked off a new partnership with the internationally recognised non-profit organisation Go for Gold, with two beneficiaries from its award-winning education-to-employment programme joining the architecture company's Cape Town design studio as interns this year.

Go for Gold tackles youth unemployment, education and skills development in under-privileged communities with its innovative four phase model that provides a fully integrated personal and professional developmental pipeline.

Initially, Grade 11 & 12 learners are given the opportunity to boost their education with weekly extra lessons in maths, science, life skills and leadership development training. After matriculation, participants take part in a year-long internship with partner companies which provide them with exposure to the built environment and enables them determine their course of study the following year.



An added advantage is that partner companies to get to know their bursary candidates before investing in their tertiary studies. The beneficiaries of the programme enjoy bursary support and the secure knowledge of guaranteed employment once they graduate.

It is this holistic approach and sustainable long-term strategy that sets Go for Gold apart and ensures the programme's high success rate for its beneficiaries and partner companies.

dhk has been running a successful bursary scheme for many years, and the new partnership with Go for Gold will run in parallel with the company's existing programme, supporting

dhk's commitment to development and transformation within the industry.

Jacqui Barhouch, Associate and Head of Communications at dhk who spearheads the company's involvement in the programme said "With Go for Gold we're able to make a meaningful difference in the lives of young people while opening up the world of architecture to students who may not have even been aware of this as a career option."

dhk is the first architecture company to partner with Go for Gold and the firm is challenging others to take part, "We want to encourage other built environment professionals to get involved with this programme

and help build a pool of bright young talent," said Barhouch.

Go for Gold is approaching companies within the South African built environment to join the programme and make use of its developmental pipeline to secure graduates for industry who are work-ready and have practical experience within the sector. As an NPO, Go for Gold is able to offer benefits that complement companies BBBEE requirements throughout its four phases and also boasts an enterprise development company, Uketha Investments, that benefits companies and future beneficiaries alike.

Photo credit: Grant Payne

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Red mist in the woods

EPPING-based wood panels distributor KayDav – which has enjoyed solid profitability for a good number of years – has slipped into the red after taking a bad debt knock in tricky trading conditions.

The company specialises in compressing wood waste into solid panels for use in the construction, furniture manufacturing and shop fitting industries. In recent years KayDav has also diversified into the packaging sector - a move that is looking increasingly promising.

In the half-year to end June KayDav reported a 5% drop in turnover to R435 million but there was a marked fall in operating profit to just R2 million (previously R21.6 million) as operating expenses increased by R12 million to R119 million. After finance costs were paid KayDav found itself R1 million in the red.

CEO Gary Davidson said adverse domestic economic conditions lead to a contraction in demand which was "acutely felt" in the board distribution and adaptation segment. This segment still accounts for 92% of KayDav's revenue.

He said sales in this segment decreased by 8% to R398 million.

Davidson matters were compounded by a significant increase in the bad debt expense to R9,7 million (last year: R5 million) as a result of specific bad debts written off and increased provisions to cater for long outstanding debtors.

He noted that if the bad debt expense was stripped out then operating expenses were only 7% higher – which is more of less in line with inflationary cost increases.

Fortunately for KayDav the company balance sheet remains robust with a gearing (debt to equity ratio of 23%) and a sturdy net asset base of R195,9 million.

Davidson explained that the net overdraft position R32,3 million stemmed from paying a large supplier earlier than its normal trading terms required.

Looking ahead, Davidson pointed out that the wood-based panel industry was seasonal with the majority of revenue and profits made during the second half of the year.

He reckoned this, in conjunction with management's expectation that the bad debt expense for the second half-year would be significantly lower than

that of the first half-year, should see KayDav profitable for the full year to end December 2017.

"During this challenging period, where low business confidence levels continue to suppress demand, our focus is on weathering the storm. For KayDav this implies strong working capital management and continuing to improve our service and product offering to customers."

Davidson stressed management of the board segment continued to operate KayDav for the long term. "Therefore decisions are being made to improve profitability and sustainability beyond this economic downturn."

Turning to the small packaging segment, Davidson said revenue grew by 34% and operating profit before interest by 33%. "We are confident that this segment has sufficient opportunities for strong growth during the short and medium term."

Overall, though, there remains an element of caution with KayDav skipping the interim dividend until the company returned to an acceptable level of profitability.

Lightweight but robust - aluminium crane system technology

OVER the last few years, the manufacturing sector for smaller-load handling cranes of under a ton has been experiencing some extremely dynamic development. The vacuum and handling technology specialist Schmalz was one of the first manufacturers to launch a fully developed system of lightweight aluminium crane systems back in 2006.

Loads weighing under a ton are handled in practically every logistics process, and lightweight crane systems have a huge number of application areas, where fast handling speeds and an increasing pressure of supply are demanding facilities to increase their handling efficiency.

In warehouses and forwarders, where the goods moved are predominantly toward the lower end of the lifting capacity range, the need here is for manually operated crane systems for rapid handling. Responsive lifting aids are also indispensable in pro-

duction and assembly processes. "Schmalz lifting solutions cover the entire range. We see major potential for aluminium crane systems in the automobile industry, for instance, which is considered a pioneer in ergonomic workplace designs," says explains Malan Bosman, Products Manager - Pneumatics, Tectra Automation.

Cranes - and especially aluminium cranes, which are easy to operate yet highly robust - are playing a vital role here. Bosman elaborates: "The effort required to move the load using aluminium cranes is only around half as much as comparable steel systems. We achieve this responsiveness by finding the optimum mass-load ratio through individually tailored crane solutions."

The full ergonomics of the system go beyond just their improved weight, with each system component being optimised for maximum ergonomic efficiency.

The Table Bay steps up efforts to save water

WITH Cape Town in the throes of a crippling water shortage, Sun International's The Table Bay hotel has introduced various interventions to recover, reuse and store water in order to conserve water and limit the hotel's impact on both the environment and municipal water supply.

The Table Bay has intensified its efforts to save and reuse water by implementing two grey water collection systems. The first collection system treats and stores water from the kitchens and a number of rooms, which is then used to flush the public toilets in the banquet area, staff ablutions and to also water the gardens throughout the hotel. The second collection system recycles backwashed water back into the swimming pool.

"It is astonishing that in South Africa we use fresh, potable water for flushing toilets. Abroad, it is commonplace to use grey water for this purpose. We can now proudly say that The Table Bay is doing the same within our banquet area and staff ablutions," says Joanne Selby, the General Manager at The Table Bay.

In addition the hotel

has installed a complete recycling pool backwash water system that will feed back into the pool to further optimise the use of water at the pool.

To improve the water efficiency of the hotel's gardens, water wise plants are being planted; with the hotel's flowering plants being replaced with succulents which require less water. In addition, the irrigation system in the garden beds at the main entrance has been replaced with a drip system which reduces water consumption by up to 60%.

Selby explains that additional water meters have been installed to

allow water consumption in different areas of the hotel to be monitored closely. With these water meters, the team will be able to incorporate water monitoring into the Energy Monitoring dashboard to measure usage and generate reports. This will enable the team to identify areas of high consumption and proactively implement tactics to curb it where possible.

"We are also experimenting with various water saving devices in the kitchens where water usage is necessary. These include devices such as flow restrictors on taps and energy and water efficient shower-

heads" says Selby.

The Table Bay has also introduced a campaign to engage its guests in its water saving efforts. Notices are placed on arrival, in rooms and bathrooms to advise guests about the hotel's water savings campaign and offer easy tips for reducing water consumption that won't compromise the guest experience.

"Being a five star hotel with a vast international, green conscious clientele, we have found that guests are very willing to participate in our efforts because they see it as taking positive action towards the envi-

ronment," says Selby.

"We are proud of what we have achieved in our efforts to date to make our operations greener. The interventions we have implemented have allowed us to retain similar water consumption during peak occupancy periods to that of our lowest occupancy periods.

"Looking ahead, The Table Bay will investigate systems to facilitate rainwater harvesting. Water conservation is a long term initiative for us. We hope to inspire other companies to do be proactive about saving water," concludes Selby.

City supplier payment rate a boost for business

THE City has surpassed its own targets for the timeous payment of service providers and suppliers by paying 97% of them within the first month of a service having been delivered, where possible. This is for the last quarter of the previous financial year. Late payments weaken the economy on all levels, therefore having a negative effect on job creation and growth.

"Many small businesses simply go under when they have to wait months on end for payment of a service that they had provided. Small and medium-sized businesses especially do not have the capital resources to wait for lengthy periods of time for payment. It is therefore very important that



government ensures their sustainability and enables their growth, which leads to increased job creation and ultimately to social stability," said the City's Mayoral Committee Member for Finance, Councillor Johan van der Merwe.

The City is constantly looking at all of its financial and operational processes to

ensure that improvements are made where possible. This is in line with our Organisational Development and Transformation Plan which seeks to position Cape Town as a globally competitive business city by forging relationships between government and the private sector to encourage growth and job creation.

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Top ten reasons to register your trade mark

By Janine Hollesen, Director at Werksmans Attorneys

THE significance of registering trade marks should never be underestimated by any business with countless reasons as to why you should do so.

In this article we discuss the top 10 reasons why.

1. Adding value to your business

- Trade mark registrations add value to your business as they can be transferred in the case of the sale of your business or a unit or licensed to third parties in exchange for royalties.

2. Infringement

- On registration, you can prevent third parties from infringing your mark by using the identical or similar mark for the same or similar

- goods or services.
- The certificate of registration can prove to be an effective and more cost efficient means to resolve disputes.

3. Social Media complaints

- Social media platforms such as Facebook, Instagram and Twitter have trade mark complaint procedures to stop third parties employing user-name squatting tactics or using the trade marks in other unlawful ways.
- We find that these social media platforms react sooner on the production of a certificate of registration.

4. Domain name complaints

- A registered trade mark can also be used to lodge a



domain name dispute which is done via the South African Institute of Intellectual Property Law in the case of .co.za domains and with the World Intellectual Property Organisation in the case of other top level domain names such as .com, .net and .org.

- These bodies have been appointed as accredited service providers in these disputes.

- Although rights of use can also be relied upon, a certificate of registration is rather handy in these types of proceedings.

5. Trade marks appearing in search engine adverts

- A trade mark registration can also be used to stop the use of trade marks in sponsored links which result from the purchasing of keywords from search engines including Google

Adwords.

- Trade mark complaint procedures for such use is just as effective with a certificate of registration going a long way to ensure that the search engine removes the use of the mark, if used illegitimately.

6. Securitisation

- Trade mark registrations can be used as security for purposes of raising capital.
- This can only be done in relation to registered trade marks.

7. Defence to infringement claims

- You can rely on your registered trade mark if you are threatened with trade mark infringement proceedings.

8. Detention of Counterfeit Goods

- Registered trade

marks can be registered with customs in terms of the Counterfeit Goods Act ("CGA") which is a means to curb counterfeit goods from entering our borders.

- Once registered, customs officials contact us to advise of any shipments of goods which feature the mark concerned.
- Steps can then be taken as provided in the CGA to ensure the seizure of the goods and eventual destruction thereof.

9. Use of ®

- Only once the trade mark is registered can the ® symbol be used which is a clear indication to the outside world that the mark is registered.
- The symbol could

serve to dissuade third parties infringing upon the mark.

10. Costs

- The costs to register trade marks are not excessive, especially if the benefits are taken into account.
- If a trade mark registration is properly maintained by the payment of renewal fees every 10 years, the trade mark registration can last forever.
- It is therefore highly recommended that the registration of your brands not be overlooked.

Trade marks are territory specific so it is important to consider registration in South Africa and in other countries in which you use or propose to use your trade marks.

New 420hp truck tractor from FAW

At FAW Vehicle Manufacturers South Africa Coega-based plant, production is currently geared to the newest truck in the FAW extra-heavy commercial vehicle range – the modern 420hp FAW 33.420FT 6X4 truck tractor.

A number of pilot units of the FAW 33.420FT truck tractors have been on extensive real-time testing with key clients across the country operating in various transport sectors, such as long-haul, construction and agriculture.

Comments from key operators included: "Very comfortable and easy to drive"; "You don't feel as if you're driving a big rig, it's so smooth and effortless"; "the cost of operation we monitored in our trail was very reasonable"; "an extraordinary vehicle, worth putting in an order and more"; "More stylish and modern"; "improvements are functional, cost effective and welcome".

One of the most important new features is the increased horsepower which is now rated at 420hp. This power is produced



through the 6-cylinder in-line water-cooled, turbocharged and inter-cooled FAW engine.

The Euro 2 engine produces 1 750N.m of torque at between 1 200r/min and 1 600r/min, and a power output of 309kW at 2 200r/min. The engine also features an air filter with a pre-filter for cleaner operation and 24V electrical systems with easy access to electric relays.

The manual 12-speed transmission makes for easy driving.

A number of other new features include the change of the size of the fuel tank to a larger 600-litre aluminium

fuel tank. The braking system combined with full air-braking ABS, drum brake with S-cams and automatic slack adjusters, and exhaust brake all contribute to the ease of driving and safety on and off the road. All this also contributes to better performance without compromising cost of operation.

The semi-sleeper forward-tilting cab has been designed with driver and passenger safety, and comfort in mind, as well as easy access for maintenance. Comfort features include air-conditioning and radio with MP3 and USB connection.

A large windscreen and angled side windows, together with large proximity mirrors and curb-side mirrors, offer exceptional visibility.

Making the driver's 'office' even more comfortable and safer are a heavy-duty air-suspension driver seat with height adjustable control, movable and telescopic steering column, and inertia-type driver and passenger seat belts.

For convenience the tubeless radial tyres (315/80 R22.5 16PR) can be inflated via a tyre inflation pipe straight from the air-tank.

Is carpooling the future of urban mobility?

Asks Chris Megan, CEO and co-Founder of mobility app, uGoMyWay

URBAN mobility in Cape Town is a crisis on the brink of disaster that will compromise economic development and is now threatening personal wellbeing. Time is a luxury we can no longer afford. The question is, how could this have happened and been allowed to get to this stage?

One shock to any system rarely causes a disaster. In Cape Town, the second shock was more nuanced. A number of buildings in the CBD were overdue for modernisation. This process allowed for more parking capacity to be accommodated by building upward. Why not rebuild your 32-storey head office with 10 storeys of parking? After all, the building will have the same footprint at ground level. At the same time, old areas of the city such as the Harbour, the Foreshore or the Silo District were repurposed as new retail or office space and again, furnished with ample parking for all the new staff and customers. Even more nuanced, developers want to develop where rents are accelerating, which leads to a switch from out of town development to excessive densification in CBDs.

We can add one last shock to this system by



the name of the Passenger Rail Authority of South Africa (PRASA). If only our passenger train network had responded positively to the economic development our city enjoys, this story could have had a very different ending. Instead we have a 400% increase in train cancellations. 15% of all trains never show up on the entire network and only 65% of trains arrive on time. Overcrowding is so dire, the space on the outside of the carriages is now full. In terms of safety, the situation is even worse and wholly untenable.

Overcoming nearly two decades of mismanagement, excessive bureaucracy and institutionalised corruption, PRASA has a 20-year plan to replace its 50-year-old infrastructure and rolling stock - costing a whopping R170 billion - but the likelihood is that the situation will get worse for a good few

years, before it gets any better.

Any one of these shocks might have accelerated the City of Cape Town from crisis to disaster. The combined effects of the three will undoubtedly lead to a fourth, namely the collapse of the road network into chronic congestion and daily gridlock (nothing like you are currently experiencing, much, much worse, no matter how many video-camera-wearing traffic officers there are enforcing basic road manners, although this is something...).

Despite this real and dire situation, the solution to traffic congestion is actually very simple.

Put more people into less cars!

We will have to be taught how to share, because there aren't too many other plans available. The faster we admit this, the sooner we might begin to avert the disaster.

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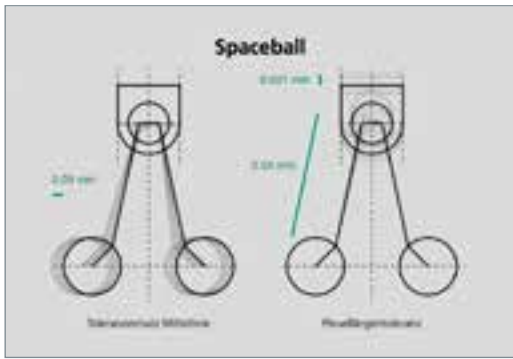
- Substantial deals - Product launches - Expansions, etc.

editor@cbn.co.za

Seascope Marine offer ‘revolutionary’ 50HP DTorque turbo diesel outboard

THROUGH its distributor agreement with Yanmar Marine International (YMI), Seascope Marine will soon be offering the Neander Shark DTorque diesel turbo outboard to targeted customers in the commercial offshore, military, fishing, rescue and charter-marine sector. It would also perfectly serve tender boat requirements on large yachts storing diesel fuel only. YMI's return to the diesel outboard market follows an exclusive cooperation and distribution agreement with German outboard manufacturer Neander Shark in whom it also has an equity stake. YMI is to distribute Neander Shark outboards worldwide through its extensive network with access to more than 130 countries.

The DTorque outboard develops 50 hp using a small 800 cm³ turbocharged, twin cylinder diesel aluminium crankcase engine with common-rail fuel injection



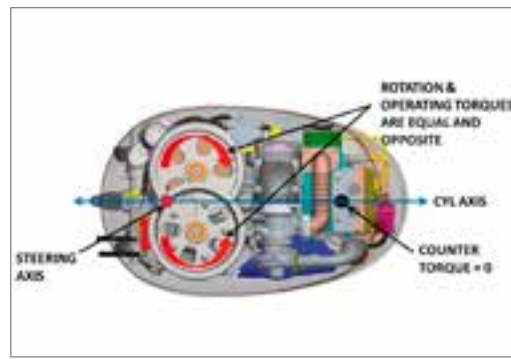
and a unique dual counter-rotating crankshaft. “This means that the outboard is not only light, powerful, clean and fuel-efficient, it is also remarkably smooth in operation as the two crankshafts counterbalance each other and cancel out most of the vibration that a conventional inline two-cylinder diesel block could be expected to produce,” explained Seascope’s sales manager, Jamie de Jong.

“What is more remarkable” says de Jong “is the units torque output. Peaking at 111 Nm @ just 2 500 r/min gives the DTorque exceptional lugging

ability and to be able to get onto the plane very quickly. Such performance from a petrol engine equivalent could only be expected from a 70HP+ outboard at much higher revs and higher fuel consumption...

“This outboard can be easily operated at the tiller as well as from a helm. The lack of vibrations and low noise level are remarkable, improving operation comfort yet delivering impressive performance” he said.

Diesel engines in this segment have advantages over the petrol counterparts regarding operating costs and longevity. For example,



a fuel storage reduction by 20% is sufficient to achieve the same range compared to a petrol engine of the same performance. Furthermore, diesel fuel is available tax free in some maritime areas. High torque in combination with lower fuel consumption, better performance and above all a diesel fuel related higher operating safety leads to expected demand in new maritime segments. Further engine variants as well as a power increase to 75 hp are planned for further development.

With over 60 years’ experience – Seascope Marine Services has the skills and capability

to overhaul, maintain and service all major diesel engine manufacturers products (main engine & Auxiliary) including the DTorque, as well as turbochargers and reduction gearboxes.

“In order to offer the most efficient and timeous service our engineers and technicians undergo continuous training through in-house practical, technical and on-site training and regular participation in training courses offered by the OEM’s so that our customers can be assured of having the most experienced engineers available” concluded de Jong.

Brit impressed by the Coega SEZ

THE Coega Development Corporation (CDC) hosted the Commander of the Order of St Michael and St George (CMG) and member of the Royal Victorian Order (RVO) British High Commissioner to South Africa, Nigel Casey at the multi award winning Coega Special Economic Zone (SEZ).

The visit, meant to

explore economic trade and facilitate investment between South Africa and the United Kingdom follows the recent appointment, earlier this year, of the British High Commissioner to South Africa, said Dr. Ayanda Vilakazi, CDC’s Head of Marketing, Brand & Corporate Communications.

Casey in his remarks about the

CDC highlighted the impressive development that was on the ground. “I’m particularly pleased by the number of investors who have taken advantage of this amazing economic zone and made a great success of their investments.”

Casey made the comments after visiting Zone 3 of the Coega SEZ and was taken on a walk about at the Discovery &

WNS call centres which employ over thousands of young graduates.

South Africa is the largest recipient of British Foreign Direct Investment (FDI) in Africa by accounting for 30% of the total UK FDI with the value of £13.1 billion. The UK is viewed as a historical, strategic trade and investment partner for South Africa and therefore remains a key

market. Whilst the Coega SEZ located within the Nelson Mandela Bay, the only metro in South Africa which has two ports. The SEZ currently hosts over 40 operational investors with investment value of R6, 996 billion. The success of CDC has enabled the creation of 102,794 jobs and trained over 92 583 people since inception, concludes Dr. Vilakazi.

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Landmark repair of floating dry dock

30 August 2017 was a very significant date for EBH Namibia (EBHN), in that it was the day that the Angolan Ministry of Fisheries (Pescangola) floating dry dock was docked in Walvis Bay for repairs.

"For some time, we have recognised that strategically there are a number of pivotal synergies which exist between Pescangola and EBHN; and, on a national level, between neighbouring Angola and Namibia," says Hannes Uys, CEO of EBHN.

As the preferred shipyard on the West coast of Africa, EBHN is already well-known in the Angolan maritime and fisheries sectors, as many of the support vessels which service the West Af-

rican offshore oil industry operate out of Angolan ports.

"However, in terms of the floating dock repair, a project from an Angolan authority is truly a landmark and historic first for EBHN," comments Uys.

"We certainly value the opportunity which this project presents; and, in so doing, further enhancing positive relations and co-operation between our neighbouring countries," he adds.

From a logistical perspective, in order to get the dry dock to Walvis Bay, an EBHN team travelled to Luanda to ensure that the dock was seaworthy, and compliant with international towing regulations, enabling it to be towed the more



than 900 n.m. (nautical miles) to Walvis Bay.

The dry dock, known as the 'Boa Vista', had its basic hull constructed in 2011 by a shipyard in Ukraine. The dock then had all its systems completed by ENP in Portugal before being sold to the Angolan government. The dock - with dimensions of

62 m x 21 m - has the capacity to lift vessels with a docking weight of up to 2 000 tons.

"EBHN's exclusive mandate is to restore the dock to a good operational state. This will involve approximately 25 tons of steel repairs, corrosion protection and the commissioning of all sys-

tems. To do this, the dock will have to spend some 20 days at EBHN's Panamax-sized Nampont 3 dry dock; and then a further 10 days berthed in Walvis Bay," explains Willie Esterhuysen, Commercial and Marketing Manager at EBHN.

To observe the project in progress, Pes-

cangola representatives will be visiting EBHN during the second week of scheduled repairs.

"Even though this dry dock repair is 'first' in terms of repairing a dry dock at our facilities, our experience and competence makes us the ideal partner to conduct a repair project of this nature," says Esterhuysen.

EBHN is very fortunate to have a full house in terms of repair projects currently; and looks forward to continue providing their customers with service excellence, Esterhuysen advises.

Since its founding in 2006, EBHN has established an enviable reputation as a supplier of reliable, high-quality ship and offshore repair services. This has

firmly established the company as the preferred shipyard on the West coast of Africa.

"Our association with the Angolan Ministry of Fisheries is a momentous achievement for all involved; and speaks volumes in terms of how Pescangola and EBHN can partner synergistically and successfully to our mutual benefit. It also very clearly demonstrates how our two neighbouring countries and economies can collaborate going forward," EBHN's Uys enthuses.

"It is indeed a very valued relationship that we foster in mutual respect. We hope accordingly to continue being of service to our Angolan associates in the future," he concludes.

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Innovation by TPT saves millions

A depth of experience and a proactive approach by the technical team at Transnet Port Terminal's Port Elizabeth container terminal has saved the company millions of Rands, improved turnaround time, set a new loading record and met customer expectations in May 2017.

Since 2013, when the two-berth PE Container Terminal (PECT) became the first South African terminal to load bulk ore carrying vessels using ship-to-shore cranes (STS) paired with RAM revolver spreaders, it has been loading bulk vessels in addition to container vessels thus complementing the port's three-berth bulk and break-bulk terminal. The RAM Revolver spreaders can be unhooked from the cranes when they are needed to load or

unload containers. This combi-terminal strategy enables customers to export and import non-containerised cargo at the container terminal and has resulted in the terminal successfully exporting more than 2,5 million tons of manganese ore over the past four years. Over this period the export ore volumes through the container terminal have increased by an average of 22,5% year-on-year which is providing it with a valuable revenue stream.

Nevertheless customers wanted more capacity to increase the loading rate and reduce vessel stay time at the port.

"We found an innovative solution to the problem by proposing to convert crane 3, a Liebherr ship-to-shore, to be compatible with a RAM revolver spreader like crane 2 and crane 4 on either side of it," said Jaco Meyer, Technical Manager PE Container Terminal. He further added that the team realized that the unconverted crane 3 positioned between crane 2 and crane 4 on the quayside was a dummy and when loading bulk using skiptainers it hampered operations by preventing the other two cranes from loading adjacent hatches on the vessel.

When TPT's technical team requested the OEM (Liebherr) to conduct the conversion they received a quote for R2 159 million. Siya Mhlaluka, TPT GM for the Eastern Cape, proudly explained how TPT's technical team decided to take up the work themselves.

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No justification for any increase in Port tariffs



THERE is no justification for any increase in Port tariffs and it is time port users were compensated for decades of over-charging, says the Cape Chamber of Commerce and Industry.

The Chamber was commenting on proposals to increase port tariffs by 8.45% this year and 24.8 percent next year.

Ms Janine Myburgh, President of the Chamber, said recent revelations and court cases had made it clear that Transnet had been involved in a great deal of wasteful spending and corruption and it was time for cargo owners to “claw back” money spent on excessive port charges.

“...we have become aware of a massive wasteful spending and a corruption problem in the Transnet family.”

In the letter, she pointed out that a 2012/2013 study by the Port Regulator had found that cargo dues paid by cargo owners were 874% above the global average. It was true that these dues had been reduced but they were still above the global average.

She pointed out that the Regulatory Manual for Tariffs said that “the key purpose of applying claw-backs is

to ensure that the National Ports Authority or any other port user is fairly treated and is not subject to unfair losses or gains...”

Ms Myburgh said a further problem was that the NPA based tariffs on how much revenue they needed rather than the cost of operating the ports. Port users had every right “to expect the revenue raised from the ports to be well and productively used. Unfortunately, this is not the case, and profits on the ports go to Transnet.

“In recent months we have become aware of a massive wasteful spending and a corruption problem in the Transnet family. The ‘Gupta leaks,’ for example, have revealed that a ‘kickback’ of R95,6 million was paid on a R651 million order for cranes. On a second purchase of 22 cranes from Liebherr, a ‘kickback’ of R46,4 million was paid.

“The situation in Transnet is even worse. The former Chairman of the Transnet Board, Mr Popo Molefe, talked about wide-scale looting and went to court to have a R4,8 billion order for unsuitable Spanish locomotives set aside. The Court cancelled the deal and ordered Swifambo Rail Leasing, the intermediary in the deal, to refund a sum of R2,6 billion.”

The Gupta leaks had revealed that, in all R5,3 billion in “fees” on locomotive purchases had been paid to com-

panies with Gupta links.

“In these circumstances, we submit, that it absurd to base tariffs on ‘revenue needed’ when the revenue could include billions of rands for wasteful or corrupt transactions by Transnet.”

“It is the Chamber’s view that it is now time for cargo owners to be given the advantage of the claw-back provision and for port dues and other tariffs to be reduced in order to compensate cargo owners for years of over-charging,” Ms Myburgh said.

New fuel storage facility open for business

THE Port of Cape Town’s new fuel storage facility operated by black-empowered Borgan Cape Terminals, is now fully operational. The terminal received its pilot consignment of diesel aboard the tanker Marlin Ammolite in the first week of July 2017 and was tested ahead of full operation this month.

Located on approximately 37 273 square meters of land at the port’s Eastern Mole, the new fuel storage and distribution facility for cleaner fuels is poised to assist with security of fuel supply in the region.

Construction began in late 2015 after Transnet National Ports Authority awarded Borgan Cape Terminals a 24-year lease to develop a new independent fuel storage, distribution and loading facility. Borgan Cape Terminals was identified as the preferred bidder. It is owned by Netherlands firm VTTI and



The first liquid bulk vessel discharged product at the Borgan Cape Terminal at the Port of Cape Town during the first week of July 2017.

black economic empowerment companies Thebe Investment Corporation and Jicaro.

Cape Town Port Manager Mpumi Dweba-Kwetana said: “With an estimated investment of R890 million, the awarding of this contract to a 30% black owned company in partnership with an international operator, speaks strongly to Transnet’s commitment to the Market Demand Strategy (MDS) and the vision of the Operation Phakisa programme of creating capacity ahead of demand and unlock-

ing South Africa’s ocean economy.”

Such partnerships between the Port Authority and the private sector emanate from Section 56 of the National Ports Act. This mandates TNPA as landlord and ports master planner, to contract with private terminal operators to design, construct, rehabilitate, develop, finance, maintain and operate port terminals or facilities.

Boasting a total capacity of 121 908m³ from 12 tanks, the terminal’s product port-

folio includes diesel, petrol, FAME (fatty acid methyl esters) and ethanol for blending and jet fuel.

Energy is recognised as one of the key commodities in driving economic growth. The South African government has included the Borgan Cape Terminal as a strategic project under Operation Phakisa. The terminal has accelerated transformation of the sector with its inclusion of emerging black-owned, independent fuel suppliers.

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CTC Plant celebrate 25 years



Those with a good memory will remember a special occasion in a particular year, say 1992, others will identify events, songs or movies perhaps.

It was the year of the Olympics and some of the major highlights were; South Africa was allowed to compete for the first time since 1960; Germany sent a single unified team for the first time since 1964; baseball was officially included as part of the games, and at an individual level, Chinese diver Fu Mingxia became the youngest Olympic gold medal winner ever at the age of 13.

Tiger Woods was just 16 years old when he made his debut in a PGA event to become the youngest player ever to play in the PGA. Though he missed the cut in the event, what he has achieved in the years that followed is a well-known history.

It was also the year of Cricket World Cup which Pakistan won by defeating England in the finals. This was the first time coloured clothing, white balls and matches under floodlights were introduced in the world cup.

The Bodyguard, Basic Instinct and Aladdin were the some of that year's popular movies; songs that made it include "Would I lie to you", "Beauty and the Beast" and "Don't let the sun go down on me".

On a more serious note White South Africans voted in favour of political reforms which ended the apartheid policy, F.W. de Klerk and Nelson Mandela are jointly awarded the Nobel Peace prize and created a power-sharing multi-racial government. The maiden voyage of the Space Shuttle Endeavour began when the spacecraft was successfully launched from the Kennedy Space Center in Florida, Hurricane Andrew hits South Florida, Bill Clinton was nominated as the 42nd President of the USA and Prince Charles and Princess Diana separated.

While Colin McOwen remembers these events his most vivid memory of 1992 was the day when he set up shop in the then 5 000 m², now 20 000 m², premises in Airport Industria and CTC Plant Company opened its doors for the first time. Fast forward to September 2017 when he celebrated the firm's

25th anniversary – no mean feat for a small business that operates in the cut and thrust, highly competitive world of used construction plant.



Early aerial view of CTC Plant premises circa 1995.



Founder and CEO Colin McOwen

Colin's venture in trading in used equipment in Cape Town, had its foundations in the construction machinery business, initially with the Hitachi/Michigan dealer Premier Metal and then with Bell Equipment with whom he has had a career long friendship. Cutting his teeth in this tough world of even tougher machines stood him in good stead when he started CTC Plant Company and its success has been based on those early lessons learnt with large dollops of hard work which ensured customer satisfaction.

Few if any competitors can match CTC Plant's experience and broad service offering. Seeing opportunities has led to the company expanding into related products and services which complement the original concept of offering reliable, fully reconditioned parts and equipment at competitive prices.

Best in class workshops

The backbone of the reconditioning business is a well-appointed and expertly staffed workshop where parts and machines can be returned to OEM

specifications thus ensuring customers of the reliability and performance of a new machine.

CTC Plant Company boast perhaps the best equipped workshop in the Western Cape coupled with engineering expertise second to none. This is borne out by contracts with major OE earthmoving supply companies who have come to rely on CTC Plant's capabilities, entrusting their brand to safe hands. Operations undertaken include complete machine strip down, sandblast and rebuild to OEM specifications, presenting the customer with a virtually new machine. Skilled workshop personnel can manufacture or rebuild all a machine's working parts including any size of bucket, repair or manufacture excavator booms and all hydraulic pipes, cylinders and seals using the latest manufacturing techniques and state of the art equipment. The workshop incorporates an engine and transmission rebuild centre, an electrical division and



a machine shop to repair or re-manufacture hydraulic cylinders and control systems. Executing all aspects of the machine's refurbishment under one 20 000 m² roof ensures strict quality control can be managed without reliance on outsourcing of vital machined components. The end result is a satisfied customer who keeps coming back and tells his or her friends about their experience!

Transporting heavy loads

The transportation of naturally heavy, bulky and robust earthmoving machines and equipment led CTC Plant to establish a transport division as an additional service offering. This division has expanded and today comprises a fleet of nine mechanical horses and lowbed trailers and a crane truck, which not only transport customers

machines to and from refurbishment but also contract for other heavy loads. The transport division operate over the length and breadth of the country offering a safe reliable service at competitive rates.



The refurbishing business relies on the acquisition of quality earthmoving machines, not only rebuilding or repairing a customer's own machine. These machines are purchased for stock after thorough inspection to ensure they are capable of being repaired or rebuilt to original specifications. CTC Plant's range of used machines represents good value with the added confidence that comes with expertise developed over 25 years. This expertise is found in the more than 80 staff members of the company, many of whom have more than 10 years' service with the company and who are steeped in various aspects of the earth moving machinery business. This means that customers get the correct advice as to which machines are most suitable for their application.

Customers return

More than 70% of used equipment turnover comes from existing customers which confirms the honesty and value they receive. Satisfied customers always come back for more of the same! They might not always get the cheapest price compared with others in the business but reliability and dependable customer service ensure that the machine will earn him



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money and not be standing idle while waiting for parts due to an unexpected breakdown.

Hydraulic hammers and attachments are part and parcel of the earthmoving game and it was a natural progression for CTC Plant to be able to offer a quality range of these implements. But like most things in life, there are good and bad hammers and attachments which can make or break a company's



reputation for quality and customer service.

Having the experience and knowing how to recognise the good from the bad and weed out inferior products, led CTC Plant to form an association with the TEMPO Attachment range of hammers and attachments. The product's superior performance has quickly made this brand the market leader in the Cape since its introduction. TEMPO Attachment's superior design and quality extends to its wide product range which includes grapples, tyres handlers, long and extended booms,

quick attachments, screening buckets, drum cutters, augers, rippers and demolition attachments. Its superior quality reflects in high levels of reliability and low operating costs and the product range is naturally supported by CTC Plant who carry an extensive range of spare parts. The parts store also stocks spares for most other brands of hammers and consumables such as moils.

Crushers & crushing

Operating out of a specialised division and manned by experienced hands-on experts, CTC Plant's crusher division provides a full onsite back up service for these specialised machines. It is not enough to simply sell these machines but also to provide on-site services such as commissioning, machine adjustments and servicing to ensure full production volumes are achieved. A plentiful stock of wear parts is always available – an absolute necessity for these machines which

operate in a hostile environment. As with its other divisions, crusher customers have grown to trust and respect the in depth knowledge and experience offered which back up CTC Plant's crushing division.

Finance and future

Securing bank finance for used equipment is not always easy but CTC Plant has built up a respected relationship and track record with most financial institutions since it opened its doors. So much so that it often assists in securing finance for clients that would otherwise not be available. This aspect has resulted in CTC Plant offering in-house financing options to selected blue chip clients.

Ensuring that high standards of engineering are maintained is what drives the CTC Plant apprenticeship scheme which recently saw four youngsters successfully complete their four year MerSETA course to become qualified as Earthmoving Diesel

Artisans and Diesel Mechanics. "We only strive for excellence and we are proud of what they have accomplished" commented their mentors, Oltman van den Heever and John Buchanan.

Doyen of used earth moving machine business

The inherent toughness of earth moving machinery means that by design, they last a long time. Contractors have long since found that it is often preferable to purchase fully refurbished parts or a complete used machine, backed by CTC Plant's warranty and reputation, than outlay hard earned cash on new, particularly in today's economic climate. Good used parts and machines is the cornerstone of CTC Plant's business and popular machines are continuously being acquired and stripped for usable parts and components. Where necessary, high quality repair or refurbishment is undertaken to restore the part to full working condition where it is offered at a fraction of the price of a new component. Meeting the demand for quality parts at attractive prices has been CTC Plant's mantra from the day it opened its doors 25 years ago.

Alongside their extensive inventory of used parts, CTC Plant offers a large range of new replacement parts, particularly hydraulic pumps, motors, swing motors and similar components.

Today the company boast what is arguably the largest stock holding of used parts in the Western Cape, if not in the country, saving customers time and money, as a one stop destination for keeping these hard working machines, working.



25th Anniversary Celebrations!



The traditional celebration braai.

CAUTION! Colin is 60!

Managing Director, Colin McOwen recently turned 60. His birthday coincided CTC Plant's 25 year celebrations – all the more reason to celebrate! Words from the staff recognised the occasion:

"The supreme quality for leadership is unquestionably integrity. Thank you Colin, for years of patience, integrity and guidance. Our wish for you is that the future welcomes you with all things good and prosperous."

Colin and his special birthday cake.



Staff and Mangement of CTC Plant, Airport Industria.



Long service coming up!

Next to Colin, the next longest serving member of staff is Oltman van der Heever who joined CTC Plant shortly after it opened its doors in 1993. "Olla" is an apprentice mentor and Workshop Manager who in March 2018, will celebrate 25 years of unbroken service with the company.





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Atlas Copco expands range of dewatering pumps

ATLAS Copco Portable Energy has expanded its offering for the dewatering market with the launch of over thirty new heavy-duty, high capacity pumps. This includes the addition of three high-flow models to its PAS range of centrifugal dry prime pumps. The new pumps are capable of accommodating flows of up to 1 400 m³/h.

“Since acquiring Varisco we’ve established a consistent presence in the dewatering market,” said Wim Moors, Vice-President Pumps, Atlas Copco Portable Energy. “The new single-brand portfolio provides our customers with the best choice and widest flexibility when selecting a high-quality pump for their application.”

Atlas Copco’s offering for the dewatering market comprises of highly efficient wet and dry prime centrifugal pumps for construction, drainage and emergency applications, plus specialised models for wellpoint applications and pumping abrasive liquids and bentonite mud. A new piston positive displacement pump

has been launched that is specially designed to run dry without damaging internal components. It is ideally suited for wellpoint applications where the volume and depth of water is low.

The new pump range is Atlas Copco branded, although the Varisco name is retained as part of the VAR range of

centrifugal wet prime pumps and will therefore remain synonymous with first-class dewatering solutions. The Varisco brand will also continue to be used exclusively for the industrial pump range.

To offer customers extra flexibility, all ranges can be supplied with a diesel engine or an electric motor as part of

Atlas Copco’s E-Pump concept. Furthermore, up to six modular configurations are possible per range. Dependent on the range, pumps can be supplied on a standard pump block, a basic or flexi-skid, or as part of a trailer, crate or fully containerised package.

As well as its seven centrifugal and piston positive placement

pump ranges, Atlas Copco offers portable submersible dewatering pumps as part of its WEDA+ range.

The range recently underwent a design overhaul, resulting in the introduction of five innovative pumps that offer up to 20% overall reduction in power consumption compared to previous models.

BMG World opens

BMG marked the official opening of the recently upgraded ‘BMG World’ distribution and engineering facility in Johannesburg, by hosting a two day expo in September for suppliers, customers, the press and staff.

“This high profile event, which included site tours, product exhibits and working demonstrations, showcased how BMG integrates its vast product range and extensive technical services, into tangible operational efficiencies,” says Gavin Pelsner, manag-

ing director, BMG, part of Invicta Holdings Limited. “The reveal of BMG World was the culmination of a consolidation and supply chain re-engineering strategy, which began nearly 10 years ago. The company’s R400-million investment to upgrade the existing Droste Park facilities into a leading edge distribution centre, centralises functional and support operations onto one site. Through this rationalisation initiative, BMG strives to achieve cost optimisation, improve

regionalised branch office systems, thereby enhancing customer service capability.

“Visitors were impressed by the enormity of our operations, our comprehensive product range and our extensive service offering. BMG has expanded dramatically since 1974 when it was established as a single bearings shop in Durban. Today the company has more than 148 BMG branches and a wide distribution network in South Africa and across borders into nine

African countries.

“The BMG team remains committed to being a customer driven business, focusing not only the supply of quality components, but more importantly on providing world class integrated engineering solutions to diverse industries.”

The BMG World distribution facility processes approximately 4 500 transfers to branches daily and moves more than 1 000 t of product per month, using advanced lifting and conveying equipment. The automated



BMG marked the official opening of the recently upgraded ‘BMG World’ distribution and engineering facility in Johannesburg, by hosting a two day expo in September for suppliers, customers, the press and staff.

warehouse management system controls over 300 000 line items moving through the 308 000 m³ warehouse.

This upgraded facility enables BMG to continue to provide high levels of operating efficiencies and delivery service, in line with continued growth of the business.

In addition to its central distribution function, BMG World also houses the company’s specialised operations, including the fluid tech and engineering facili-

ties, technical resources and field services.

The upgraded premises also include significantly expanded training facilities in the customer service centre for the BMG Academy of Excellence. The company recognises the need to grow engineering skills, not only for its own succession requirements, but also for the development and sustainability of African economies.

BMG’s extensive product portfolio now encompasses bearings,

seals, power transmission components, drives, motors and materials handling components. Also in the range are hydraulics and pneumatics, fasteners and tools, as well as valves, filtration and lubrication systems.

A cornerstone of BMG’s solutions service is 24 hour reliability engineering – a philosophy aimed at keeping plant in full productive output for as long as possible, without unnecessary maintenance or unplanned stoppages.



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KSB Pumps and Valves latest generation of its standardised Etanorm water pump series continues to top the sales charts in South Africa, as well as the rest of the world.

In Africa, it has become a trusted name in the agricultural, municipal and other industries where its versatility, efficiency and reliability have made it the most popular pump type in use today.

Produced non-stop since 1936 the Etanorm has sold more than 1,5-million units, which have proven themselves over more than eight decades. In its latest form the latest version comprises 43 pump sizes, which can be driven by either 2-pole or 4-pole motors. The selection chart has also been extended with additional pump sizes, so that sizes can be selected that are the closest to the best efficiency point.

Efficient design

In intensive work with CFD (computational fluid dynamics) for flow simulation KSB's development engineers have also optimised the hydraulic contours making it more efficient in order to easily meet tough global efficiency requirements, including the benchmark EU requirements (ErP) of Commission Regulation 547/2012/EC for water pumps.

According to Dave Jones, regional sales manager for KSB Pumps and Valves, the engineers placed a particular focus obtaining an excellent suction and a low NPSH value, thus minimising the risk of cavitation and obtaining a smooth and stable pump operation even in difficult operating conditions. This means the pumps run reliably and contribute to a greater availability of the overall system.

He adds that the material range comprises cast iron, bronze and nodular cast iron as well as stainless steel. The diversity of materials and a large choice of seal variants have extended the suitability of the new type series to applications beyond those of water. The space allocated to the mechanical seal has also been enlarged to enhance venting to make allowance for this. The new spacious design also facilitates dismantling and re-assembly of the mechanical seals.

Locally manufactured

"In line with KSB's common practice for industrial pumps, every pump will be supplied to the customer with the impeller diameter trimmed exactly to the duty point. Impeller trimming combined with the large range of pump sizes available for selection is the only

way of keeping the energy consumption of the pump to the minimum necessary.

Operators benefit from the type series being manufactured at four different sites — in Germany, India, China and South Africa — which all comply with the same quality standards. This makes global procurement much easier; pumps and spare parts are readily available.

Premier adds Metal Seated Butterfly Valves to its range

PREMIER have over the years had some involvement with Triple Eccentric Metal Seated Butterfly valves and manufactured a range under license some years ago, but because of the popularity of its range of Boving and other popular butterfly valves the need did not exist to pursue this range of valves.



"Available in sizes up to 2 000 mm, pressure ratings up to 150 bar..."

Because of the interest shown by the water industry in Metal Seated Butterfly valves in recent years and Premier Valves expansion into other markets such as the petrochemical industry where this type of valve has been popular for many

years, a high quality range of Metal Seated Butterfly valves have been acquired. The Titan Triple Eccentric Metal Seated Butterfly valve is of the highest quality and has all the approvals necessary to be used in the demanding petroleum industry.

Available in sizes up to 2 000 mm, pressure ratings up to 150 bar and temperatures up to 700°C the Titan can replace many traditional valves such as gate, globe and ball valves and perform the functions better with longer life expectancy. The Titan Butterfly

valve is truly a valve for all seasons!

Because of the special machining required to achieve the right angles and tolerances on the seats of a Triple Eccentric Butterfly valve, general importers of this type of valve have to send the valve back to the factory for repair. Because of its extensive in-house capability and co-operation agreements with other facilities in South Africa, Premier offers a comprehensive repair and back-up service with a fast "turn-around" time for repair of

these valves during plant shutdowns. Even though the life expectancy of the Titan Butterfly valve is longer than traditional valves, it is still a comfort to the client to know that full back-up is available when required.

The Triple Eccentric Metal Seated Butterfly valve has been used extensively in high pressure mine applications such as pump control valves on 100 bar dewatering pumps. Whereas traditional valves last for a few years in this arduous application, these valves have an impressive life span of over 10 years' service before reconditioning is required. With the benefits of compactness, ease of operation and "bubble tight" shut-off, the Titan Butterfly valve is set to become a major player in the South African valve industry.



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A step by step guide for testing control valve positioners

VALVES, the actuators that move them, and the electronic circuits that control them, are all subject to aging soon after they are installed. Valve seats wear from repeated seating and from the liquid or gas that passes through them. A valve may be stroked up to tens of thousands of times a year, which causes screws to reposition, springs to weaken and mechanical linkage to loosen. Electronic components change valve over time. All of that can produce valves that don't fully open or close, close prematurely. This "calibration drift" can result in improper regulation of the gas or liquid under the valve's control.

To keep valves operating properly, you need to periodically check electronic valve positioners. However, these checks need to be conducted quickly to minimize down time. If calibration drift is found, the valve positioner must also be recalibrated immediately. A good

tool for this is handheld field tester like the Fluke 789 ProcessMeter that can be used to test and recalibrate electronic valve positioners. It offers signal sourcing to simulate a controller connected to a valve positioner's input and can continuously adjust the source current in incremental steps, so you can check the valve's linearity and response time.

Here are the basic steps for checking a normally closed valve using a 789 ProcessMeter

- Set up the ProcessMeter in sourcing mode using the appropriate range of current for the positioner.
- Insert the source current test leads into the mA output jacks.
- Select the 4-20 mA range by moving the function switch from Off to the first mA output position.
- Connect the meter mA output to the

input terminals of the valve positioner.

- To determine if the positioner is fully closed the valve at 4 mA, adjust the source current to 4.0 mA using the push button. The valve should be closed.
- While watching the valve for any movement, press the Coarse Down button once to decrease the current to 3.9 mA. There should be no movement of the valve.
- In setting the point at which the valve starts to open, make

sure there is no counter pressure by the actuator against the force holding the valve closed when there is 4.0 mA on the controller's input. In a spring-to-close valve, there should be no pressure on the diaphragm. With a double acting piston actuator, there should be no pressure on one side of the piston. To ensure that there is no counter pressure at the closed setting, you may want to set the start of opening between 4.1 and 4.2 mA.



Fluke 789 Process Meter.

- To check the opening of the valve, press the Coarse Range Up button from 4.0 mA. Each press of the Coarse Range Up button will increase the current 0.1 mA. You should adjust the zero adjustment on the positioner to set the valve for the closing characteristic desired.
- To check the valve at the fully open position – called a span position check – adjust the source current to 20 mA using the range buttons and allow the valve

to stabilize. While watching or feeling for valve movement, press the Coarse Range Up button once to 20.1 mA. The valve movement should be as small as possible and can be adjusted using the span adjustment on the positioner.

- Using the coarse control, adjust current up and down between 20.1 mA and 19.9 mA. There should be no movement of the valve stem from 20.1 to 20 mA and slight movement from 20 mA and 19.9 mA.
- In most valves, there is an interaction between the zero and span settings of a valve controller, so it is best to ensure proper valve position adjustment by repeating the test of the fully closed and fully open positions until no further adjustment is necessary.
- For valves with linear action, linearity can be checked by settings the ProcessMeter to 4 mA and using the % Step button to step the current to 12 mA (50%) and confirm the valve position indicator is at 50% travel. If your valve is a non-linear type, refer to the valve manual for proper operation.
- To check for smooth valve operation, turn the rotary switch to output mA and select Slow Linear Ramp. Let the meter ramp the mA signal through several cycles while you watch or feel for any abnormal operation of the valve. The valve should NOT oscillate or hunt at any of the step positions of the Slow Ramp. The valve also should not be sluggish. Set the gain of the valve controller to a point that gives the best response between these two conditions.

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BORELINE is a Flexible Riser of exceptional strength and durability that makes the installation of submersible pumps simple and fast. Specially designed to replace Steel Risers, BORELINE is completely inert to rust and due to its flexibility, no internal scaling can take place.

ELIS, represented locally by Instrotech, has on offer a battery-powered ultrasonic water meter intended for measuring flow rate instantaneously and pressure and consumption in water piping (standard EN 14154 for water works), water distribution systems and other industrial applications.

The compact, highly accurate ELIS FLOMIC FL5024 has long-term stability over a wide range of measured values, and conforms to the IP68* protection class. The meter does

not need any external power supply, does not include any moving parts and has significantly lower hydraulic losses.

The technical parameters and other features of the FLOMIC water meter make it suitable not only for water consumption measurements but also for water-leak tracking and monitoring of the general condition of water-supply networks where the meter output signals can be connected via data transfer systems to remote computer control stations.

The measurement method utilised by these meters is a single-beam transit-time pulse method, based on evaluation of the time needed for an ultrasonic signal to cross the distance between two measuring transducers. In the standard version, the meter measures instantaneous flow rate (in m³/hour) and the total volume of water passed through the meter (in m³) in the given flow direction. The measured data is converted into passive pulse output signals.

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The importance of valve selection in slurry applications

THE trend to pump slurries over longer distances at higher solids concentrations is putting slurry valves to the test, as these severe applications have high pressures and are very abrasive, according to AR Controls Director Julien van Niekerk.

Another factor to be taken into consideration is that the media conveyed is often corrosive. In general, engineers designing for process efficiency find that material and equipment capabilities pose the most serious limitations on allowable process conditions.

The most abrasive media found in the mining industry are slurries resulting from hard ore types and ferrosilicon. The media and process properties vary in different parts of the extraction process. In metal-extraction mines and plants, for example, abra-

sive slurries are found in the milling, cyclone, and DMS circuits, again in concentration feed and tailings, and to a lesser degree in flotation and thickener areas.

Particle size, shape, hardness, and density all play an important role, as well as the angle of impact on the wear surface. Pumping the media at a high solids concentration, pressure, or velocity also leads to elevated levels of abrasion. These wear effects are exacerbated when throttling abrasive media.

"If the media transported is abrasive, it is best not to install valves on the bend of a pipe, or on a Y-joint," van Niekerk cautions. It is also important to consider whether the application is bidirectional or unidirectional, and to ensure that valves are installed in accordance with the installation in-



24 DeZurik KGC knife gate valves installed on a cyclone cluster.

structions provided.

Rubber-lined gaskets may be convenient to use, but can pose problems for certain gasket-free or integrated-gasket valve designs. It is best to investigate the gasket valve requirements in the early project phase to ensure that rubber lining is not applied on the mating pipe flange faces.

When carrying out a valve selection, it is

important to not only look at the process conditions, but also to consider the general installation environment. For example, the media might not be corrosive, but the environment may very well be.

"It is always best to use full port valves in slurry applications. Valves with a tortuous flow path or with an element directly in

the flow path, such as butterfly, globe and weir-type diaphragm valves, will wear prematurely in slurry applications. This refers back again to the importance of valve selection," van Niekerk elaborates.

AR Controls offers unique products for when there is a requirement for the throttling of abrasive media. For example, DeZURIK RCV rotary control valves have been engineered specifically for high-precision throttling control in severe-service applications where high-pressure media contains entrained water vapour or suspended abrasive particles.

These combine the control accuracy of globe valves with the strength of severe-service ball valves. The valves are available with a tungsten carbide or heat-treated nickel overlay plug.

Various other valves are available for abrasion isolation applications. "We also offer customers the option of using remote-mount electro-pneumatic positioners, rather than having the positioner mounted directly on the valve," van Niekerk highlights.

The positioner and its complementing air-preparation equipment are supplied in a plug-and-play stainless steel pneumatic enclosure that can be custom-made according to individual requirements. Mounting the positioners remotely in enclosures helps protect the positioner from environmental damage, and is ideal when valves are in hazardous or hard-to-reach installations. This also prevents tampering and unauthorised entry to the equipment.

"Materials technology has a direct impact on the valve industry,"

van Niekerk comments. Advanced materials and coatings are being developed continuously. However, even though innovation can be rapid, market readiness is important, as resistance to change can be a large obstacle to advancement.

Valve specialists can identify suitability issues early on, and hence it is best for them to become involved from the outset. "They will be able to offer the best solution for the most challenging applications. Working closely with a specialist valve supplier will certainly help to reduce cost of ownership and downtime," van Niekerk elaborates. It is also important to inspect valves regularly in order to detect signs of wear and failure early enough, so that valves can be maintained or repaired before they become irreparable.

Italian precision available from Summit

SUMMIT Water & Control have been wholesalers and distributors of various imported pumps for over 40 years.

Located in Maitland, Cape Town and Walmer in Port Elizabeth, its high quality products are sourced from leading international manufacturers, conforming to TUV and / or ISO requirements.

An extensive range of stock and spares supports users in the Western and Eastern Cape and its qualified staff provides an extensive after sales service.

Summit is the sole agent in its trading area for the Italian made Foras pumps.

Summit supplies pumps for irrigation, waste and drinking water treatment, the food and drinks industry, the paper and textile industry or energy and environmental technology applications.

Foras range

The Foras range is designed for the domestic, agricultural, and industrial water sectors.

Founded in 1990, Foras is backed by over 27 years' experience, which enables it to positively affect the most important sectors that use fluid handling systems.

Foras designs and assembles all its products in-house. Investment strategies in recent years have made it possible to support a number of programmes in the Research & Development Department such as the design of innovative machinery to assemble

special products, and two entirely automated rooms equipped with technologically advanced equipment to study and test newly-designed prototypes. As a result of these initiatives, Foras is able to constantly expand its range of products and research innovative processes that optimise production.

The group also has a specialised industrial division that boasts many years of experience in the in-

dustrial sector. This division is considered a leading player in the water and energy resource sector by designing and building excellent quality pumps in 28 different fields of application, including the naval, foodstuff, electrical, energy, oil, paper, chemical, petrochemical and pharmaceutical industries. The production department is able to ensure the utmost precision at every phase, from processing

molten parts to final hydraulic testing of the pump before shipping.

The machine tool department is able to process all stainless steel alloys with extreme precision, including the most difficult like Duplex and AISI904. Before being packaged for shipping, every pump undergoes a general check by production engineers in order to ensure that every production process was carried out in compli-

ance with the standards required by ISO9001. The final hydraulic performance check is carried out via testing done on 100% of the pumps manufactured. A plate is also attached to every pump showing a unique identification code, which ensures traceability of the raw materials, processed parts, checks run and people involved in the production process.

Foras Industrial pumps have been used in the following



applications worldwide: desalination plants, reverse osmosis plants (RO), demineralisation plants, filtration and ultrafiltration plants, UV power plants, process plants, off-shore installations for oil and gas and refineries, to name but a few.



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SA power system can withstand added RE capacity, says flexibility report

THE Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) under the DoE's South African – German Energy Programme (SAGEN), has published a report that identifies the South African power system to be “sufficiently flexible” to cope with added wind and solar photovoltaic (PV) generation.

“The study presented in this report confirms that the South African power system will be sufficiently flexible to handle very large amounts of wind and PV generation.

“To cope with increased flexibility requirements resulting from the installation of 4,2GW of wind generation and up to 12,8GW of PV by 2020, and 11GW of wind and 27,5GW of PV by 2030, flexibility requirements can be handled by existing and planned power plants at moderate additional costs,” the report stated.

Flexibility report

The study was performed by international engineering consultants Dr.-Ing. Markus Pöller and Marko



Obert, of Moeller & Poeller Engineering GmbH (MPE), for the South African DoE and power utility Eskom.

Published in September 2017, the report is titled ‘Assessing the impact of increasing shares of variable generation on system operations in South Africa – a flexibility study’.

The report presents the methodology and results of a study as-

sessing increased flexibility requirements to the South African power system resulting from increased levels of renewable generation in the time frame until 2030.

The study further analyses whether the existing and planned power plants will be able to cope with these requirements.

Lastly, it quantifies costs associated to increased flexibility requirements imposed

by variable renewables (wind and photovoltaic solar).

Recommendations

To ensure secure and cost-efficient operation of the South African power system even with very high levels of wind and PV generation, the author's of the report made the following recommendations:

- Application of professional short-term forecast tools/services for wind and PV prediction, including a system for short-term prediction of rooftop PV.
- In the case of very high PV installations (e.g. 27GW by 2030): Allocation of higher levels of Operating Reserve and Emergency Reserve in afternoon hours.
- In the case of very high PV installations (e.g. 27GW by 2030): Operate pumped-storage power plants in pumping mode during mid-day (and not during night time) when Residual Load is at its minimum value.

Rise of renewable energy is “disruptive moment” for power sector

ACCORDING to local energy expert, Professor Anton Eberhard, there is a window of opportunity for utilities in developing countries to build on international power reform experience and design future power markets and operating systems to respond to new opportunities offered by falling costs of renewable energy.

While renewable energy independent power producers (IPPs) take stock following the news that Eskom will be required to conclude another round of IPP power purchase agreements by the end of October, question marks remain over what the future holds for SA's power utility.

Following months of uncertainty over SA's Renewable Energy Independent Power Producer Procurement Programme, Energy Minister Mmamoloko Kubayi announced in September that Eskom would sign the agreements by the end of the following month.

To the chagrin of the IPPs, Kubayi also announced that Eskom would be allowed to renegotiate the tariffs to not more than 77c per

kilowatt hour (kWh). The Minister said the current prices were unaffordable for Eskom, even though solar and wind energy are now cheaper than Eskom's average cost of supply.

Frustrations with Eskom's status as the official buyer of power from IPPs, steep Eskom electricity prices and cheaper alternatives have created a significant increase in investments in embedded generation as well as energy efficiency.

Some observers have noted that an energy market of multiple generators, buyers and sellers is the antithesis of SA's historical monopoly model in the energy sector. Although such a shift can be viewed as a threat to monopoly energy utilities like Eskom, international trends suggest that it presents an opportunity for Eskom to transform its archaic business model.

Professor Anton Eberhard, who runs the Managing Power Sector Reform and Regulation executive education short course at the University of Cape Town Graduate School of Business (UCT GSB), notes that the past three decades have seen



Professor Anton Eberhard.

fundamental reform and restructuring of electricity sectors in countries all over the world. The old model, of a vertically integrated, state-owned monopoly, has been challenged and new institutional models have been explored and adopted that involve different levels of integration/unbundling, competition and public or private ownership, he says.

Traditionally, power systems have been vertically integrated: Power generation, transmission and distribution functions have been combined in one company. However, with generation potentially open to competition, many countries have decided to separate generation from the natural monopoly wire components.

Precise, reliable cable and connections for 50 years

WHAT do an ocean liner, industrial robotics and a Rolling Stones concert have in common?

They are all connected by LAPP cabling systems and connectors!

The LAPP Group was founded in Germany in 1957 and has become an international manufacturer and supplier of speciality cables and connectors with a product range of more than 40 000 product combinations over a range of eight core products.

The company is represented in 173 countries including South Africa.

A family owned business that is now in its third generation, it regards itself as ‘corporate’ but not a corporation, adding traditional fam-

ily values of honesty and integrity to quality, precision and reliability across its impressive product line up.

Its products are found in virtually every industry and application where low voltage power or data is transmitted; typically where a computer controls machinery be it in a robotic manufacturing facility, a passenger lift of a high rise building, intricate automotive applications such as the BMW i3 electric car or on the sound stage of a pop concert.

“The application of LAPP cabling systems and connectors are truly ubiquitous” explained Alan Liebenberg, LAPP's South Africa sales and market manag-



er. “There isn't an application or industry where we haven't been able to supply a product to meet the technical or application requirements, be it in an explosive atmosphere or arduous working condition” he said.

“While many know the LAPP name for their cable solutions, fewer are familiar with the range of supporting products

such as connectors, glands, protective conduits, marking, specialised tools and chain or drag trays - where LAPP cables interface with pneumatic or hydraulic components.

“To ensure system integrity and reliability cable terminations have to meet the exacting specifications present in the cables themselves, oth-

erwise a weak link is created in the system. This is especially important where a cable system is within a hazardous atmosphere such as in an oil or gas or deep mining environment.

“Explosion proof and connectors that resist abrasion and vibration at both high and low temperatures, or are immersed in water or corrosive liquids are all catered for in the product line up.”

Ölflex power and control cables have evolved from the original LAPP product and are specified for machinery, machine tools, system and appliance engineering, measuring, control and heating and air conditioning applications.

Unitronic data transmission systems are system solutions for industrial applications. Data, fieldbus cables, connectors and I/O modules.

Etherline is specified for data communication systems for ethernet technology. Lapp Group offers a complete product range of cables, connectors, assemblies and accessories for network applications.

Hitronic are optical fibre cables and data transmission systems with polymer optical fibres (POF), polymer clad fibres and optical glass fibres (GOF) both single and multimode.

EPIC® Connectors are the reliable connector for industrial applications, safe and

removable connection in machine building, control cabinets and in outdoor applications.

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Silvyn protective cable conduit systems and cable carrier systems protect cables from mechanical and chemical stress.

Fleximark cable marking products ensure that organisational labels on single cores, cables and control cabinets remain legible for years to come.

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Cummins provides latest technology for emissions control in rail-engine market

CUMMINS, the world's largest independent engine manufacturer, has over 70 years' experience in high-speed rail engines, reveals Andreas Dammann, Rail Business Manager – EMEA. With engine platforms from 36 kW to 3 300 kW, Cummins has a range of engines specifically for the rail market segment. These run the gamut from locomotives (QSK95, QSK60) to railcars and multiple units (Q19R) to track maintenance (QS50, Q30) and auxiliary power (K19).

At present Cummins has 28 000 engines in service in the rail market segment, which means that implementing energy-saving initiatives to reduce costs is becoming increasingly important. Here the focus is on energy- and emission-efficient traction vehicles, including maintenance and support, as well as infrastructure such as tracks and depots, and the role that telematics plays in operational efficiency.

In terms of Cummins' emission technology for advanced regions like North America (EPA line-haul regulations) and Europe (EU locomotive regulations), which is anticipated to become the standard in future low-emissions territories, the QSK95 is the cleanest and most durable locomotive engine available on the market today. The 2 MW QSK60, on the other hand, is the most versatile global locomotive engine.

Cummins' solution for Tier 4 (US) and Stage 3b (Europe) regulatory compliance is based on proven advanced active emissions control technology such as Selective Catalytic Reduction (SCR), where particulate matter is controlled in-cylinder and nitrogen oxide (NOx) is reduced. Not only does this solution reduce fuel

consumption, it also boosts engine performance and durability.

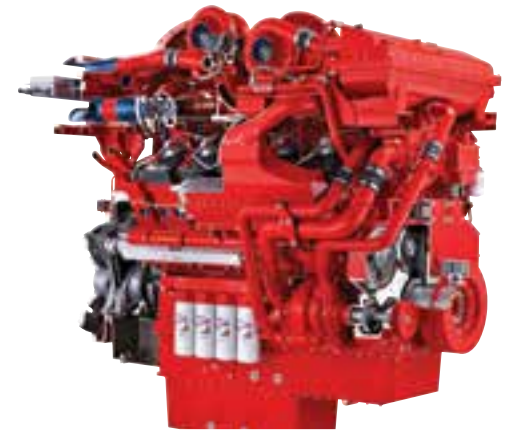
Key requirements for customers are up-time (reliability), total cost of ownership (fluid consumption) and life to overhaul (durability). Here SCR

technology represents the best emissions solution for high horsepower engines and rail applications. Exhaust Gas Recirculation (EGR) technology, on the other hand, plays an important role in Cummins' engine line-

up for on-highway and smaller off-highway engines, where ultra-low emission requirements are critical.

Highlighting the inroads that Cummins has made in the rail market segment to date, Dammann reveals that

the US has selected the QSK95 engine for its 125 mph high-speed passenger locomotive programme, while an EMD SD 90 converted with a QSK95 is in field trials at Indiana Railroad as a demonstration unit for US Freight.



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With engine platforms from 36 kW to 3 300 kW, Cummins has a range of engines specifically for the rail market segment.

Renewables to account for 85% of global electricity needs



BY 2050, 85% of global electricity needs and 44% of total energy needs will be met by renewables, according to the Energy Transition Outlook 2017 report. Dutch quality assurance and risk management company DNV GL published the report, which only took into account solar photovoltaic (PV), onshore and offshore wind and hydropower plants.

Citing the report, Climate Action noted that final energy demand is expected to be 430 exajoules in 2050, compared to 400 exajoules in 2015 with a minor increase to occur before 2030, when demand will start flattening.

"The slowing down of the demand growth is expected due to decelerating population and productivity growth, energy efficiency measures, and due to increased electrification espe-

cially in the heating and transport sectors.

"Thus, electricity consumption is projected to increase by 140% becoming the largest energy carrier," Climate Action cited.

Global electricity needs

Remi Eriksen, CEO of DNV GL, commented: "The profound change set out in our report has significant implications for both established and new energy companies.

"Ultimately, it will be a willingness to innovate and a capability to move at speed that will determine who is able to remain competitive in this dramatically altered energy landscape".

Noting that gas is on an upward trajectory toward becoming the biggest energy source by 2034, the report identifies coal consumption as having already peaked.

Solar PV and wind power will lead the sector growth benefiting from the 'learning curve' effect; hydro will keep being a key energy source, Climate Action reported.

The costs for solar PV and wind energy are expected to reduce by 18% and 16% respectively.

Transformation

Despite predictions that CO₂ reductions are expected to halve, global temperatures are set to increase by 2,5 degrees Celsius not meeting the Paris Agreement goal of global warming to be well below 2 degrees.

Eriksen commented: "This should be a wake-up call to governments and decision-makers within the energy industry".

"The industry has taken bold steps before, but now needs to take even bigger strides".

DEUTZ DIESELPOWER, second to none

DEUTZ DIESELPOWER is a well-known innovative, technology driven local company, which has the sole distribution rights for all DEUTZ products and services covering South Africa and certain key Anglophone African countries.

It is associated with quality, reliability and legendary durability brought about by cutting edge innovation and value added service commitments to manufacture complete power generation solutions, supporting our local customer requirements.

All DEUTZ DIESELPOWER power generation solutions are manufactured to ISO 9001 standards, using only premium quality products and services. Following commissioning, its worldwide ser-

vice network provides support with experienced specialist personnel backed up by genuine DEUTZ engine parts supply.

A further commitment to a quality product and service commitment is unconditional support from an engine manufacturer (DEUTZ AG) that has been in operation for over 150 years.

Value added benefits customers can experience are:

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- Reduced downtime
- Optimised compact designs, saving installation space and manufacturing costs
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- Engine designed for lowest possible running costs (low total cost of ownership)
- Engines meeting all legal exhaust and noise emission regulations
- Low diesel fuel and oil consumption, leading to reduced CO₂ emissions
- Direct customer benefits – geared for the future and environmentally responsible.

Independent Power Producers to decide on Power Purchase Agreements

PREFERRED Bidders selected in Rounds 3.5 and 4 of the Renewable Energy Independent Power Producers Programme (REIPPP) will need to consider the various legal, financial, and credit risk implications on their projects resulting from the Minister of Energy's recommendations in her statement of 1 September 2017, before they are able to sign outstanding Power Purchase Agreements (PPAs) with Eskom.

Energy Minister Mmamoloko Kubayi announced earlier this month that she would sign the PPAs relating to 26 large-scale renewable energy projects on the 28th October. The signing would however be subject to the IPPs and the DoE coming to an accord on various issues around price and the management of community trusts.

The Minister has recommended a price ceiling of 77c/kWh for all bids in Round

3.5 and Round 4 and the viability of this is currently under consideration by Preferred Bidder IPPs. "The Minister also raised concerns with regard to the funding of the community trusts in these projects, and we believe that greater clarity over those concerns would assist in moving towards a resolution."

SAPVIA says that they will continue to do what is best for the Solar PV industry and

support the decisions of the individual Preferred Bidder IPPs once they have evaluated their positions and made a decision as to whether they are willing to proceed under the new conditions.

"We believe that the majority of the IPPs are willing to offer more value and engage openly and honestly with the Department of Energy and the Independent Power Producers office regarding the Minister's statement, but ultimately the decision lies with each of them individually," says SAPVIA Programme Manager Niveshen Govender.

"There are a number of issues that each of the IPPs involved in these rounds need to consider before proceeding with financial close. These include the obvious financial considerations of a lower price, the overall legitimacy of the process, and the risk of legal challenge after closure," explained Govender. Mr Govender says that it would be a "disaster" if the agreements were challenged after signing the PPAs.

This decision will also affect the more than 70 bidders in the Expedited Round who are waiting for official clarification around the status of those bids. "We request DoE leadership to communicate with those projects who have been sitting in limbo for the past two years. If there is a decision to be made, it needs to happen soon because the validity of those bids expire at the end of September" Govender says.



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Optimum safety with Apex safety screens

APEX Welding and Safety Screens are made from a specially formulated PVC material and provide optimum safety in workshop environments where harsh ultra violet light and dangerous u.v. radiation occurs during welding and grinding processes.

This locally manufactured safety screen incorporates a heavy duty ultra violet light absorber, which safely contains all u.v. radiation in the curtained off area enhancing safety in the environment and providing a high level of protection for workers in close proximity to welding and grinding activities.

Standard tinted PVC material while offering a visible barrier does not provide adequate protection. Extensive tests conducted by the SABS proved that Apex Welding and Safety Screens are superior to conven-



Apex Welding and Safety Screens have significantly contributed to improved safety in many manufacturing facilities throughout southern Africa.

tional tinted material.

Tested for ultra-violet transmittance, the conventional material gave readings of 0,0005%, 0,008% and 5,0% as opposed to Apex readings of 0,005%, 0,001 and 0,005%. When tested for total visible light transmittance, the tests were conclusive – the conven-

tional material allowed 78%, while the Apex material allowed only 15,5% light transmittance – a dramatic difference.

Apex Welding and Safety Screens are impervious to burning, and this is of particular importance should the material come into contact with welding splatter.

Access to cordoned off areas is easy as the patented Balledge design on the individual PVC strips facilitates easy access for both personnel and equipment. The strips parts on contact and return to their original configuration ensuring an efficient close.

Available in several configurations to suit individual requirements, the most popular version is the freestanding frame that facilitates both easy handling and portability. The screens' angled feet allow optimum utilisation of the floor space and the screens can be butted together at a 90-degree angle.

In addition to Apex Welding and Safety Screens, the company markets a range of high-speed roll up and fold up doors, which represent a leap forward in warehouse closure systems.

Modified excavator grabs scrap

HPE Africa has supplied a Hyundai R200LC-9S excavator to Agni Steels SA, which has been specially modified for scrap metal handling applications.

"This Hyundai R200LC-9S 20 T excavator is currently being used during 24 hour shifts at the Agni Steels mini steel melting unit, commissioned in the Coega Industrial Development Zone of the Eastern Cape. What's notable about this robust machine is its low diesel consumption, which has been monitored and confirmed at 9,8 l/hour," states Alex Ackron, HPE Africa's managing director. "Apart from this machine's impressive productivity at the plant and its features for smooth and easy control, Agni

Steels management is pleased with the swing speed, the long undercarriage design, which ensures greater stability and the auto idle facility that contributes to diesel savings. Other benefits are the non common rail engine which reduces service costs and the Hyundai factory warranty of two years or 3 000 hours."

To cope efficiently with the demands of scrap metal handling, the HPE Africa workshop raised the cab of this machine by 1 m and extended the dipper by 1 m. An 'Orange Peel' grab was installed, which provides a grab capacity of 650 dm³ and load weight of 920 kg.

The excavator, with the grab attached, has a maximum lifting capacity of 1,7 t (with a 70%



safe working load) at a 4,5 m height and 6 m reach.

Hyundai R200LC-9S excavators are fitted with six cylinder turbo-charged air cooled Tier II engines to provide high power, reliable performance and economic operation.

A computer aided power optimisation system ensures the optimum level of power

and hydraulic flow for every application. The operator is able to select preferences for boom or swing priority, power mode and optional work tools. The operator cab ensures clear visibility on site, greater safety and enhanced comfort.

These excavators have ground-line access to all critical service and grease points for easy maintenance.

Revitalised Burma looks ahead to growth



Burma Plant Hire is an active player in landfill and rehabilitation work.

LONG a household name in the Cape, Burma Plant Hire has emerged from a restructuring phase and is gearing up for growth with the renewal of its plant fleet.

Part of the Raubex Group's Materials Division, Burma Plant Hire has been an integral part of the construction and plant hire community in the Western Cape and beyond since it started in 2003 – and has expanded into mining contracting and other fields. The company is a Level 2 contributor to BBBEE.

Burma Plant Hire is an active player in landfill and rehabilitation work, and has also recently contributed to renewable energy projects in wind and solar power generation.

Izak van Niekerk, divisional head designate at Raumix Materials Division, says the investment in 30 new quality brand tractor-loader-backhoes (TLBs) was part of a broader revitalisation of Burma Plant Hire's capital stock. The fleet renewal programme also included the

addition of large dozers, excavators, loaders and articulated dump trucks.

"We have focused on strategic locations where we are building critical mass, investing in equipment that will boost our flexibility and responsiveness," says Van Niekerk.

Burma Plant Hire managing director, Theuns Burger highlights that the company's depth of expertise in plant management is enhanced by its sophisticated enterprise resource planning (ERP) system. This has been built up over the years to integrate and streamline the company's operations.

"Having these systems in place allows us to respond quickly and effectively to customer requirements, and to maintain a very close working relationship with our original equipment manufacturers (OEMs)," says Burger.

He highlights that serving the construction sector today is not just about providing well-maintained, fit-for-purpose equipment; it is also about collabo-

rating with customers to meet stringent compliance requirements in safety, health, environment and quality (SHEQ).

"Our reputation for customer service is built on adding value to our customers' operations, which includes working with them to manage and mitigate business risk," he says.

Burma Plant Hire's experiences in a number of sectors and its substantial equipment fleet have allowed the company to become a respected materials handling sub-contractor in sectors including construction, landfill and mining. In recent years, it has conducted mining, earthmoving and rehabilitation projects for major mining companies in commodities including iron ore and manganese.

According to Van Niekerk, the company is seeing an expansion of production at certain mines following rising commodity prices, and the company is well placed to continue providing the mining sector with contracting services.

BURMA PLANT HIRE AND MINING

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Booyco PDS demonstrates compliance

THERE remains an ongoing need to inform and educate the mining industry as a whole in terms of compliance to the legislated requirements as well as the correct application of Proximity Detection System (PDS) technology.

This is according to Graeme Jardine, general manager field services at Booyco Electronics, who says the company was recently afforded the opportunity to do this by the South African Colliery Engineers Association (SACEA).

In presenting Booyco Electronics' PDS offering to SACEA members, the company's managing director Anton Lourens discussed the differentiators the Booyco PDS offers users of trackless underground equipment in hazardous and fiery environments.

"The presentation was followed by a practical demonstration and although this could not be conducted underground and was done on surface, the advantages of the Booyco PDS were evident to all that attended," Jardine says.



A simulation was done using an older model trailer mounted diesel engine supplied by ECS that was equipped with a Booyco PDS.

Included in the demonstration was the operational functionality of the Booyco PDS as well as its full intervention capability. Jardine explains that notably should the operator fail to stop of his own accord it is possible for the vehicle to be stopped when using the Booyco PDS and interfacing with the OEM.

The practical demonstration was conducted using a Fermal LHD equipped with the Booyco PDS and this highlighted the locally manufactured product's capability on the newest equipment available. In addition a simulation was done using an older model diesel engine that was trailer mounted and supplied by ECS. This showed that the Booy-

co PDS works equally as effectively and with the same level of compliance on previous generation equipment.

"Contrary to misinformation that had been circulating in the industry, being able to demonstrate the intervention capability on a much older diesel engine not only proved that this is possible but has rubbished the idea that it is not possible to use the PDS on diesel driven equipment," Jardine says.

The Booyco PDS transfers information between users via Booyco Electronics' Human Machine Interface (HMI) and system communication is exchanged with operators using icons, making it easy to understand.

Atlas Copco reorganizes into Power Technique

ATLAS Copco Power Technique has evolved out of the success of the Construction Technique business to bring 360° air, power and flow solutions and services to mining and industry across Southern Africa.

Since its establishment in January 2012, Construction Technique has developed into much more than construction; with its extensive product and service offering which includes core products for air (portable compressors), power (generators and light towers) and flow (pumps) as well as light equipment (handheld tools, compaction and concrete equipment), the business area's steady growth across multiple segments is reflected by a turnover of EUR1,557 billion in 2017.

"We needed a new name to reflect our current and future focus as well as all the segments where we are already successfully conducting business and Power Technique is a perfect fit," says Philip Herselman, General Manager, Atlas Copco Power Technique Southern Africa (previously Construction Technique). "Power presents the key element of our product offering and it is what our customers identify with when it comes to the core product



portfolio of air, water and electricity. As an essential power source in many applications, our products are providing energy to sustain customer productivity."

While construction customers will always remain close to its core, Power Technique's extensive product offering which includes well-known brands such as Atlas Copco, Chicago Pneumatic and Varisco, will address a much wider spectrum of industries including petrochemicals, manufacturing, mining, quarries, water well and oil & gas, offshore, power plants, emergency relief and events.

The transformation of Construction Technique into the new Power Technique Southern Africa business area encompasses a number of key developments which will be completed by 2018: The Road Construction division's Dynapac business was divested to the Fayat Group in Q2 2017; the Construction Tools division will now be integrated into Portable Energy through 2017 which saw handheld tools, light compaction and concrete equipment and accessories remain with Power Technique

while hydraulic attachments and accessories moved over to Epiroc (a separate company which stemmed from the split of Atlas Copco Mining and Rock Excavation Technique from the Atlas Copco Group together with Construction Tools in Q1 2017); in Q4 2017 the Portable Energy division will be divided into Portable Air and Power and Flow; service remains a top priority and will continue through the Power Technique Service division; the fourth division, Specialty Rental, rounds off the 'new look' Atlas Copco Power Technique business area.

Alongside its core products, the new product line up will include boosters, Zone 2 generators and quality air offerings. The new business area's focus on temporary, semi-permanent and permanent applications and the successful route-to-market strategy through rental and distribution, direct and Specialty Rental will remain largely unchanged.

"While we are global market leaders in our core products of air and tool solutions, we are the new kid on the block when it comes to power

and flow," says Herselman. "It is our objective to extend our global leadership position across the entire product offering from Power Technique to become a turnkey air, power and flow solutions supplier in all segments where we do business. Our aim is to develop Power and Flow into the largest division, followed by Portable Air and Tools, Rental and Service by 2022 and to achieve our objectives we will give priority attention to four key areas - new products, acquisitions, dealer management and people development."

Organic growth, along with new and expanded product offerings will be augmented by an aggressive merger and acquisitions programme that will be rolled out across all four divisions over the next five years. "We plan to create more tools and systems to amplify our dealer and customer partnerships," affirms Herselman. "To address our fourth focus area, people, we will concentrate on recruiting, training, developing and retaining our employees who remain our most important assets and core to our future success" concludes Herselman.

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Business school commits record R4,6 million towards scholarships for 2018

CALLS for free tertiary education for poor South Africans are gaining momentum ahead of the release of the findings of the Fees Commission later this month, but how this might be achieved remains unclear.

In the meantime, institutions need to do everything they can to make their degrees more accessible to poorer students said Associate Professor Mills Soko, head of the UCT Graduate School of Business (GSB). And the GSB is putting its money where its mouth is. This year, it has made a record R4,6 million in funding available for scholarships for the 2018 academic year – which translates to roughly 20 full-time MBA scholarships or 40 part-time scholarships.

Associate Professor Soko explained that the school had pooled resources from the GSB Foundation - an independent trust that works with alumni of the school to raise funds in support of expanding access to

“For many students, studying at the GSB is the opportunity of a lifetime...the school is internationally renowned...”

education at the GSB - and other existing scholarship money, to make additional funds available for next year's intake, and is encouraging historically disadvantaged South Africans and African citizens to apply.

“For many students, studying at the GSB

is the opportunity of a lifetime as the school is internationally renowned and is one of just three business schools in Africa with triple-crown accreditation, with endorsements from EQUIS (the European Foun-

dation for Management Development), AACSB (The Association to Advance Collegiate Schools of Business), and AMBA (The Association of MBAs),” said Segran Nair, Director of Open Academic Programmes at the school. The GSB has been rated the top

business school in Africa, nine years in a row, by the prestigious Eduniversal Rating Agency.

“An MBA is a big investment that can be expected to pay big dividends - both personal and professional - for graduates,” he added. “But we know that many high potential students are not even applying because they lack the finances.”

Nair said that this has galvanised the GSB to shake up its systems and processes not only to make more funds available for scholarships, but also to allow students to apply for funding at the same time as they apply for a place on a programme.

For more information and to apply please visit www.gsb.uct.ac.za/scholarships. Scholarship applications close on October 31, 2017.

Applications open for MSc students in Food & Nutrition Security

A developer of new food products, a teacher at a youth prison and a nutritionist are among those breaking new ground as the first group of students to follow the MSc programme in Food and Nutrition Security at Stellenbosch University (SU). The programme sets out to help policy makers and practitioners in different sectors make better decisions on questions about food provision and food security. The course also considers of good health and the role that adequate nutrition plays therein.

The first group of nine students started their two-year studies at the beginning of 2017. Applications are now being received for the 2018 intake.

It is presented jointly by the SU Faculty of

AgriSciences' Departments of Food Science and of Agricultural Economics, along with the SU Faculty of Medicine and Health Sciences' Department of Interdisciplinary Health Sciences (Human Nutrition Division). The programme comprises twelve theoretic modules and a research project.

“Nutrition and food security is not only about making sure that no one goes hungry, but also about ensuring that the right kinds of food are produced and that all citizens of the country have access to healthy options to eat,” says Prof Gunnar Sigge of Stellenbosch University's Department of Food Science. “This is easier said than done, because poverty and unemployment play

their part in how affordable and easy it is for people to eat so-called 'healthy foods'”.

More about the MSc programme in Food and Nutrition Security:

- To qualify for selection, you need a relevant BSc degree in the Science (3 years) and an Honours degree, OR a BSc Agriculture degree OR a four year degree in Health Sciences with a minimum pass mark of 60%, OR a Bachelors or Honours degree that has been approved by the Senate on level 8 of the National Qualifications Framework (NQF), with the same pass mark as mentioned above.

Zest WEG group commits to education and skills development

AT the leading edge of electric motor technology and related sectors, the Zest WEG Group is also innovating its empowerment initiatives by facilitating ownership of its shares by two black owned Non Profit Organisations (NPOs) that directly benefits communities in need.

Hot off the press is the announcement that the two NPOs, together with the company's employees Trust, now hold 51,6% of Zest WEG Electric, the South African arm of the Zest WEG Group. One of the NPOs is in the education sector and the other in the micro-enterprise support sector. Significantly, the shareholding comprises 31,68% black female beneficiaries.

Zest WEG Group CEO Louis Meiring says that not only will most of the beneficiaries of the NPOs be black women, but the arrangement will sustain the good work of these NPOs into the future.

“We previously readily achieved our Level 4 status, based on our shareholding, skills development, supplier support and community investment, and this



Mentoring apprentices, interns and trainees in various disciplines.

is simply the next step in our transformation journey,” says Meiring. “Now, this ownership-related initiative takes us significantly further on our pathway as a responsible corporate citizen.”

Zest WEG Group provides a range of skills development resources to schools, universities and the broader community including teaching, equipment, financial aid and infrastructure. These aim to develop local talent and capacity, bringing young learners into the business and industry.

“With our double-digit growth, even through the recent downturn, our business is creating opportunities for job seekers, and we prepare them well to replenish the positions

that our expansion requires,” says Juliano Vargas, Zest WEG Group's logistics and operations director.

Skills are developed in-house through apprenticeships, internships and mentoring in various disciplines and are sometimes also supported with study bursaries.

“Through our involvement with small business incubators, we even select and support small enterprises before they are in a position to become our suppliers,” he says. “Those that progress well may earn contracts from group companies, following which we review their performance and keep track of them to ensure that they deliver good value in their services and products” he said.



What is a learnership?

A learnership is a structured learning process for gaining theoretical knowledge through an accredited training provider and practical skills in the workplace leading to a qualification registered on the NQF. A learnership is outcomes-based and not time-based and allows for recognition of prior learning. Learnership duration varies but the average is about 12 months.

Who is eligible to enter a learnership programme?

Any person, employed or unemployed, may apply to register for a learnership:

- If you are employed, you may register for a learnership programme within the sector where your company or organisation operates; or
- If you are unemployed, you may register for placement in a learnership programme at your local labour centre or with employers in your area.

The Department of Labour refers unemployed individuals, who meet the minimum criteria, to employers looking for learners.

How does one apply for a learnership programme?

- If you are employed, find out which learnerships are available in the sector in which you work. Upon deciding which learnership programme is appropriate, you will need to enter into an agreement with your employer stating your rights and responsibilities as a learner; or

- If you are unemployed, you must register your profile at the nearest Department of Labour office, after which you may be referred to employers who may be looking for learners to enter learnership programmes.

What is an apprenticeship?

The apprenticeship system is a well-known technical training system, which covers both practical and theoretical components offered in listed trades. Once you have completed your training, you will need to pass a trade test to qualify as an artisan.

Who is eligible for an apprenticeship programme?

Any South African citizen, 16 years or older. There are different admission requirements for the various trades. Competence in Maths, Science and English will enhance your chances of selection.

How does one apply to enter an apprenticeship programme?

- If you are unemployed, you may apply to a company that is offering an apprenticeship programme; or
- If you are employed, consult with your employer as to the requirements and correct procedures to be followed to enter an apprenticeship programme.



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CityVarsity: work readiness and the meeting of industry demands

WITH the constantly changing needs of the creative industries, it has become more important than ever for an educational institution to keep its finger on the pulse. More than ever, students are looking for courses that will offer optimal industry readiness training, and ultimately enhance their employability.

Preparation for industry is one of the corner-

stones of CityVarsity's approach to education. Industry connectedness and real-world simulation are integral to each of the institution's eight departments – Acting, Film, Journalism, Multimedia, Animation, Sound Engineering, Photography and Art.

Each programme's curriculum is developed with the needs of industry in mind. Lecturing staff are employed on the

basis of both their industry knowledge and their connections to creative communities. Their real-world industry connections are invited to provide input on course material, to ensure that the material taught is relevant. Such consultation is encouraged throughout the year, with the greatest direct engagement occurring at CityVarsity's annual Industry Indaba.

In addition, students are encouraged to engage in real-world activities within their industries of interest. Students

engage in a range of industry projects, from film and photographic shoots for corporate clients to sound recordings for actual bands. Apart from gaining practical knowledge of their respective industries, students also gain valuable learnings in terms of the etiquette and hierarchies of the working world.

In keeping with its commitment to employability and the meeting of industry needs, CityVarsity also offers short courses in a variety of disciplines. The

short courses are designed for candidates who work or study during the day. These highly-focused skills-driven programmes provide training in specific areas, enabling candidates to acquire the skills they need to meet specific industry demand.

CityVarsity's Short courses include Presenting for TV, Graphic Design for Digital Media, Vocal Training for Radio, DSLR Filmmaking and Game Design. Small classes allow for intensive individual

attention from lecturers, and optimal contact time with relevant industry-standard equipment.

In this way, CityVarsity ensures that short course participants maximise the time they spend on their studies. Participants value the opportunity for study that does not conflict with their working hours, while employers see the short courses as a means to upskill their staff.

Such upskilling makes their employees more

multi-functional, and enables employers and managers to develop their own staff rather than outsourcing personnel each time they require additional services. Short courses are thus an investment in their human capital and company's general skills base.

With its full-time programmes under regular industry review and its ever-evolving offering of short courses, CityVarsity continues to engage with its industries and meet demand.



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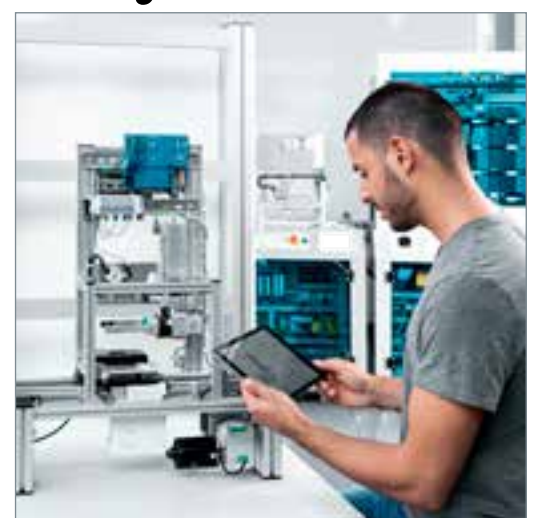
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The maintenance technician in the smart factory

IN the future of the fourth industrial revolution (Industry 4.0), Mechatronics will assert itself – the machine will work and function in a networked fashion. Intelligent components and systems will configure themselves as a highly self-organised system ensuring a smooth running sequence. Production of one-off parts will become as fast and cost effective as mass production runs. For the maintenance technician, access to this “intelligent” network will be paramount. The maintenance technician will automatically receive warnings and service requests from the ma-

chine. But all this data is a challenge unless highly advanced tools are used to translate the information. Virtual solutions will support the maintenance technician in his work and augmented reality will combine information recorded by machines with the virtual environment. This will be presented on the maintenance technician's smartphone or tablet enabling and assisting the complex task of maintenance in tomorrow's highly flexible and continuously changing production systems. This radical change in the industrial approach requires a shift of thought and a new approach to ma-

chines and the industrial environment. We have to ask ourselves whether we are and will be ready for the fourth industrial revolution from design to management and maintenance? In the words of Enrico Rühle, Festo Didactic, “He who doesn't start learning today will soon be living in yesterday's world tomorrow.” This is the reason Festo has pioneered in the topic of Industry 4.0 (I4.0) and can currently offer hands-on practice and training on the “smart factory” philosophy. Festo South Africa has a Cyber Physical (CP) Factory that is currently being used to train the technicians and design-



ers of the future in aspects of I4.0. The CP factory offers hands on exposure to modular machine concepts, warehousing, manufac-

turing execution system, system integration, mobile robotics, energy monitoring, component tracking, augmented reality and much more.

Readfast courses used in 170 Cape schools

READ Foundation's Know-How & Pretleer Study courses for schools have been used in 170 Cape schools with excellent results over the past 20 years. The Readfast courses

have also been presented to many top corporates across a wide range of industries, whose directors have understood the investment value of fast, effective reading skills to ride to-

day's tsunami waves of information. The Graduate Business Schools of USB, UCT, WITS, GIBS and Milpark, have continually offered the workshops to their students since 1980.

The schools' courses were later translated into Xhosa, and Read Foundation founder Britha Padkin trained and equipped a Xhosa teacher and presented the programme to Mkhanyiseli Primary School in Nyanga, where a third of the Grade 7's were failing. At the end of that year, they had a 100% pass rate! Subsequent year's results were also significantly improved. This is because teachers were trained in situ, and could continue to implement the techniques.

Seven years later, Britha again contacted Mrs Mbane the Principal, to ask how the Grade 7's did right through high school. She replied, “Very well.” Britha explained that it was not only the reading and stu-



Britha Padkin, is the founder of READ Foundation's Know-How & Pretleer Study courses.

dy techniques, but the focus on the child's innate worth, talents, and their academic success, that gave them the motivation to persevere, and the goal-setting which provided vision and purpose to their lives.

However good that prototype project was, it had limitations. Now Britha has prepared a full day participative workshop for teachers and lecturers in order to further expand the benefits.

Britha explains that innovation, improvisation, and creativity

are keys to learning. “Using colours, pictures, and actions, help to make learning more fun. Memory games help provide longer and more permanent recall of what is learnt. Of paramount importance is vocabulary for general knowledge, comprehension, and the ability to better express oneself. Teaching should not be just telling, it should be more questioning to challenge reasoning and thinking skills.”

Turning to human interaction, Britha stresses psychological understanding of children's problems, and ways to help, using praise and affirmations, and the power of positive thinking.

“HR Departments, who have budget for social responsibility interventions, should seriously look at the holistic approach of Read Foundation's Workshops, which can be tailored to requirements of staff, and their student children's high school” commented Britha.

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Belgium Campus targets ICT education

EARLIER this month, Eyewitness News reported that the latest South African jobs statistics continue to reflect an appallingly high unemployment rate. According to the World Bank, the 2016 average unemployment rate for all upper middle-income countries was 6,2 percent. In 2016, South Africa's rate was at 25,9 percent, rising to 27,7 percent in 2017. Of these unemployed droves, a staggering 39 percent have never worked before, highlighting the plight of unemployed youth.

Belgian entrepreneurs, Jan Rombouts and Enrico Jacobs established the Belgium Campus in 1999. The Campus strives to alleviate the educational and unemployment challenges in South Africa, specifically

by aiding candidates in meeting the critical skills needs in the Information and Communications Technology (ICT) sector.

"With the understanding that traditional institutions do not always deliver on work readiness, the Belgium Campus has implemented pioneering methods to ensure that graduates not only receive a qualification, but are immediately employable too," confirms Jacobs, founder and Vice Chancellor. "Our initial inspiration in 1999 was the need to build a new nation, with talent being sourced from the grassroots levels up – all while bringing higher education, research and industry together to get graduates ready for the real world."

As the only institution that concentrates exclu-

sively on the ICT sector, the Belgium Campus' graduates feed up to 10 percent of the total graduates to the industry annually. Qualifications are locally and internationally accredited to the highest academic standards available in South Africa, obtaining the recognition of international partners, including the Association of the Catholic University of Leuven (Belgium).

With a focus on continuous improvement, and in recognition of the dire need to integrate technology and innovation into education, the Campus has joined the Infor Education Alliance Programme (EAP). The Infor EAP delivers next-generation tools for future leaders, and works with local universities across the EMEA region.

Time to reimagine education system

An article by Ian Merrington, CEO of the Cape Innovation and Technology Initiative, first published by VentureBurn, 26 June 2017.

UNEMPLOYMENT in SA is at a 14-year high with youth unemployment (15-34 years) reaching 38,6% in the first quarter of this year. Most concerning is that unemployment among the youth is disproportionately high even among those with tertiary education.

South Africa currently spends a higher proportion of its budget on education than the US, Germany or the UK, yet we now have 9,3 million people who wanted to work but who in the first quarter of this year were unemployed. Furthermore South Africa's higher education system was rated 134 the out of 138 countries in the World Economic Forum's (WEF) 2016/17 Global Competitiveness Report.

Future skills changing

Our reality check with regards to this bleak unemployment situation and skills mismatch is that the type of skills which business and industry will need in the near future is changing completely. We are witnessing a dramatic change in the drivers of business evolution where it is predicted every company will become a technology company in the future and legacy competitive advantages are likely to disappear completely.

The price of com-

puting has plummeted, enabling the fragmentation of industries on the basis of data and analytics while the price of collecting and analysing data has also plummeted. He adds that we are about to witness The Great Reskilling.

Coming of data scientists

Companies have already experienced major digital disruption, but the next assault will be on individuals within companies.

It is already well documented that robotics, artificial intelligence and machine learning will be rapidly replacing repetitive and mechanical jobs throughout the labour value chain. Those at the bottom are most under threat from robotics but the effect will be felt throughout the labour market.

Automation

A report by McKinsey Global Institute concludes that 30% of activities in about 60% of all occupations can be automated. Almost every occupation has partial automation potential.

The retail industry, cashiers and store clerks are likely to be among the early most endangered species. However the threat to this staple of the local labour force runs well

beyond robotic automation and replacement.

Rethinking education

A further challenge is the rapid pace of tech innovation. Key findings from that WEF report reveal that it has taken decades to build the training systems and labour market institutions to develop major new skill sets on a large scale. Given the pace of, and scale of, disruption brought about by Industry 4.0 this is simply not an option.

An unprecedented rate of change in the core curriculum content means that nearly 50% of subject knowledge acquired during the first year of a technical degree will be outdated by the time a student graduates. In all 65% of children entering primary school today will work in completely new job types that don't yet exist.

Ian Merrington is CEO of The Cape Innovation and Technology Initiative (CiTi) and The Bandwidth Barn, a not for profit organisation which develops technology skills and job readiness programs and recently launched its second major Open Innovation Cluster, in the field of Education Technology - The first was FinTech. CiTi also runs specialised incubation and small business support programmes.

UCT launches first fintech degree in Africa

New degree combines finance, technology, and entrepreneurship to disrupt the financial services industry.

SOUTH Africa's financial services industry faces a significant challenge: the rise of modern technology, commonly labelled as financial technology, or 'fintech', combined with a lack of skilled graduates who are able to navigate this complex new terrain. The University of Cape Town (UCT) is the first university on the continent to offer a degree specifically designed to equip students with the necessary skills and knowledge to embrace the technological revolution in the financial services sector.

The new degree is a Master of Data Science with a specialisation in Financial Technology and will be offered for the first time in January 2018. The course convener Dr Co-Pierre Georg, Senior Lecturer at the African Institute of Financial Markets

and Risk Management (AIFMRM) at UCT explains: "We are in constant and close contact with the financial services industry and know that it is facing a shifting demand for skills. In the past, companies were mainly looking for advanced mathematical and modelling skills. There still is demand for these skills, but by far the largest demand now is for students who have a thorough understanding of finance combined with a mastery of modern data analytics and software development skills. Our students will be able to develop these skills in the two most exciting areas of fintech: machine learning and blockchain technologies."

Since the modern workplace requires a broad set of skills from various disciplines, the new degree is highly interdisciplinary and

convened together with the Department of Statistical Science at UCT. Associate Professor and Head of the Department, Francesca Little, outlines the idea behind the degree "We started the MSc in Data Science to give students a thorough understanding of the latest methods in statistical learning. This includes the extremely exciting field of machine learning and artificial intelligence. The idea then was to bring together UCT's 'best and brightest' from other departments to design a degree that is truly special. We are delighted to partner with AIFMRM so that we are able to offer a specialisation in the exciting new field of Financial Technology."

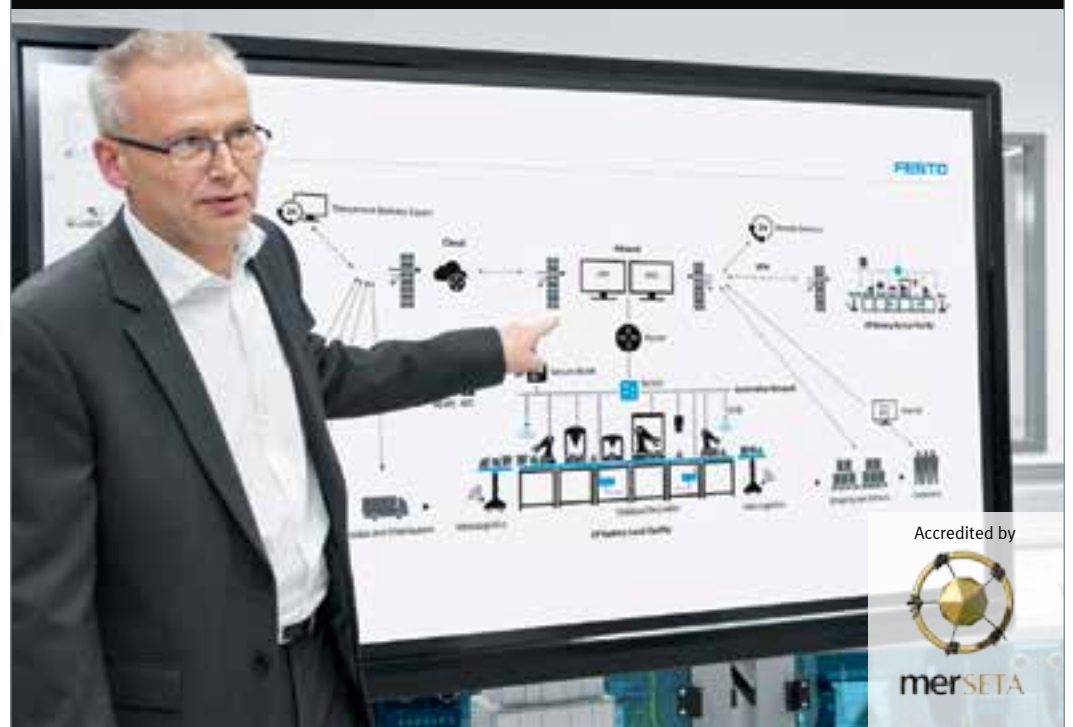
"We see extraordinary demand for the degree already," continues Georg, "also because Cape Town-

based students can do the degree part-time. This is quite important to us since we want working finance professionals to be able to complete the degree and acquire the skills to thrive in a changing industry. For students who want to do the degree full time, we do offer full scholarships to ensure that nobody will be excluded financially."

Georg concludes "Fintech offers a unique opportunity to radically transform the industry. Young startups are already challenging the incumbents and our students will be on the forefront of this technological revolution in South Africa. Our focus on entrepreneurship means that we will change the students' mindset so that they not only want to go out and 'get' a job, but also to go out and create a job - or a hundred."

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Hytec supplies turnkey 400-ton thermoplastic press

HYTEC Cape Town designed and constructed a 400 ton Thermoplastic Press for composite materials supplier AAT Composites, a Recaro Group subsidiary based in Somerset West. The press is capable of deep-moulding composite materials up to 1m², used in the manufacturing of components such as seat pans and interior panels in the aerospace industry.

Awarded over considerable competition from international manufacturers, Hytec, with the assistance of a local mechanical engineering company and an electrical company, was able to supply a complete, integrated press machine, a turnkey solution from a single supplier that was tailored to suit AAT Composites' specific production requirements, as opposed to modifying an imported press.

Resin-impregnated cloth is first suspended in trolley frames for moulding. The machine has an infeed-loader to pre-load trolleys whilst a cycle is in operation,

plus an automated feeding system to precisely transfer the trolleys from one station to the next. A preheater with two sliding drawers, each containing 99 ceramic heating elements, preheats the resin-impregnated cloth to 450° C prior to moulding and curing. The material then has to be transferred into the press within three seconds and the pre-heated moulds closed quickly in order for moulding and curing to take place at a maximum temperature of 280° C.

Once the thermo-forming duration has been completed, the press opens and the part is transferred to the out-feed station for manual removal. All of these functions require precise real-time control, as neither of the individual functions has the same operating duration. The machine design includes a range of safety and operator protection and a SCADA system to provide visualisation and control of the production process.

"Special consideration had to be given



The Hytec-supplied 400-ton thermoplastic press, which is used in deep-moulding composite materials for components in the aerospace industry.

to avoid heating of the press structure, and in particular the platens and guides, as any fluctuations would alter the 0.2 mm flatness tolerance of the platens," explains Max Hoffmann, Systems Engineer, Hytec Cape Town. "An insulating layer together with cooling platens ena-

bles the heating of press moulds as opposed to press platens." This also serves to reduce energy consumption as heating is limited to the size of the moulds installed. Press platen cooling was excluded on request of the customer, however can be easily retrofitted.

A range of Bosch Rex-

roth hydraulic components are used across the system. These include a standard press-control manifold (with latest EU safety features such as double load-holding and spool-position monitoring on all critical directional valves), and proportional displacement and pressure control with a 30 kW electric motor on the hydraulic power unit.

The main ram, supplied by sister Hytec Group company Hytec Engineering, is a single-acting displacement unit with a 450 mm diameter and 700 mm stroke. Fast extend and retract utilises two 80/50x700 slave cylinders (one with LVDT for position monitoring) which also aid in pressing. The automated feeding system is powered by two VSD drives with a pneumatic in-feed loader.

"This was an exciting project to be a part of, and is a great advertisement of the technical competency and capabilities of the Hytec Group to the country and the world," Hoffmann concludes.

Elquip Solutions and Kinkelder partner

MANUFACTURERS use large capital equipment sometimes shy away from purchasing top quality machines. The most common reason for this is the initial capital outlay. However, is this always a wise decision?

Mike Cronin, the Managing Director of Elquip Solutions, gives good reasons why it is not.

Firstly, the life-cycle costs of an inexpensive capital equipment item or consumable could be appreciably higher than those of its more expensive counterpart. One has to question: Will the cheaper machine give the same level of performance and produce the desired product quality? Will the cheaper machine be prone to more downtime and, when it needs repair, is the required aftersales support readily and speedily forthcoming?

Elquip Solutions specialises in the supply of specialist cutting capital equipment and consumables. "A prime example of the kind of quality of

product which we sell are the circular saw blades from our well-known Dutch principal Kinkelder, an international producer of top quality blades for the industrial and manufacturing sector," Cronin explains.

A professional quality circular saw blade might look to the layman like a very simple device – a flat metal disc with sharp teeth on the outer rim. "However, there is definitely nothing simple about the design of a Kinkelder circular saw blade," says Gerrit van Oosterum, Commercial Manager for Kinkelder.

He explains that significant research has been invested in Kinkelder blades, and that the manufacture of their blades is almost as much an art as it is a science. Much of the quality of Kinkelder blades lies in the years of development of tooth design and tooth spacing. In addition, there is a vast store of underlying expertise in the metallurgy of every blade.

Hydraulic magnet picks up the pieces

ATLAS Copco's HM 1500 fixed hydraulic (hydro) magnet, fitted to a 22,5 ton carrier, is efficiently and safely sorting and loading steel off cuts at a steel mill in Emalahleni, Mpumalanga.

Following a successful tender, service contract specialist, Real Tree Trading, was contracted to remove steel off cuts generated from the steel production process. "After being cut into various lengths, the steel I-beam off cuts, weighing anything between 150 and 300kg, have to be heaped and loaded onto trucks for transportation to a steel works in Vanderbijl where they are re-smelted and recycled back into the steel fabrication process," explains Real Tree Trading Group Manager, Gert Ootshuizen. Aply assisted by Masike Seritili – Contract Manager, Ootshuizen oversees the project that involves a team of 46 workers operating in the cutting, splitting, scrap and dispatch areas.

"This is the first time that we are involved in scrap cutting and removal and we needed a fast, efficient and equally important, safe bulk handling solution. An OEM referred us to Atlas Copco Power



Technique distributor, Riviera Hire, for a solution." According to Riviera Hire Managing Director, Filippo Bevilacqua, following a site inspection they immediately recommended the Atlas Copco hydro magnet as the ideal solution. Atlas Copco and Riviera demonstrated the hydro magnet and impressed with the product's performance, Real Tree Trading placed the order with Riviera Sales in Q1 2017. "We were able to supply the unit within a week," confirms Bevilacqua.

The Atlas Copco hydro magnet is available in two models, the HM 1500 (1,5t) and the HM 2500 (2,5t). With respective lifting capacities of 2,6 tons and 3,5 tons and available as fixed or movable

units, the high quality, rugged magnets are ideal for sorting, cleaning and loading applications.

Unlike a power magnet, the hydro magnet, fitted with a 13 kW generator, is attached to the carrier with just the normal hammer line hydraulic installation. The elimination of powerlines ensures a safer working environment and speeds up installation. This plug-and-play solution ensures that the end-user is up and running in no time which is good for productivity. Incorporating German technology and with operating pressures of between 120 and 350 bar, the high quality hydro magnet delivers faster and safer load cycles presenting a total lowest cost of ownership solution to end-users.

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Afrox unveils Genie® Helium N6.0

AFROX has unveiled its own genie in a bottle in the form of Genie® Helium N6.0. With a guaranteed minimum purity of 99.9999%, this speciality gas is a certified Helium N6.0 product, and also offers smart technology and portability in a revolutionary new packaging.

Andisha Dukkan, Head of Specialised Markets for Afrox, says that Helium N6.0 is supplied by Afrox's parent company Linde in Europe and represents the highest purity gas ever manufactured by the enterprise, with Afrox at the forefront of launching this precision enabling gas in South Africa.

The total amount of impurities in Helium N6.0 is below 1 part per million, making it as close as possible to pure helium and the ideal carrier gas to achieve accurate analytical and laboratory results. Analysers can therefore be assured of more consistent and reliable outcomes.

Helium N6.0 is the preferred carrier gas for hyper sensitive detection techniques such as Gas chromatography-mass spectrometry (GC MS) and GC with pulsed discharge helium ionisation detectors (PD-HID). In these applications high gas purity is of absolute importance as impurities show up in the base line as noise and can potentially mask important components. Helium N6.0 can be used to determine ultra-low parts per billion measurements which was previously never achievable with other less pure helium.

Other applications where Helium N6.0 can be utilised include medical applications, metals cutting and welding, metals refining and mining, fibre optics, electronics, instrument calibration, emissions control, radioactivity detection and environmental monitoring.

Dukkan notes that in a radical departure from standard steel cylinders, Helium N6.0 will be supplied in the new Genie® cylinder, a steel lined carbon fibre wrapped pressure vessel, encased in a tough, all-weather, recyclable high density polyethylene jacket. The 'genie' in the bottle is the built-in digital intelligence unit display, which indicates levels of usage and re-



maining gas, and has a low contents alarm which sounds when gas levels are dwindling.

The Genie® cylinder is more portable than standard cylinders, with two easy grip handles that also double as guards, and optional detachable wheels that enable users to move the cylinders effortlessly.

The 20 litre Genie® cylinder with a fill pressure of 200 bar is a Linde patented technology and also features gas identification rings with colour coding that allows for easy recognition of gas types. The Genie® cylinder weighs only 22 kg which is significantly lighter than the standard 20 litre cylinders while their wider construction makes them more stable and minimises the risk of cylinders accidentally falling over. Optional extendable handle units further increase their portability.

Phase-out of SF6 Gas in Electrical Switchgear

SULFUR hexafluoride (SF6) is a colourless, odourless, non-flammable, strong greenhouse gas, comprising of six fluorine atoms attached to a central sulfur atom. It is a hypervalent molecule which is generally transported as a liquefied compressed gas. It has a density of 6.12 g/l which is significantly higher than the density of air (1.225 g/l).

The dielectric strength of SF6 is on average 2,5 times that of air and when pressure is increased the dielectric strength also increases. High dielectric strength is useful for electrical

insulation, and specifically for resisting high voltage sparking across a gap between conductors.

Pure SF6 is completely harmless to humans, so much so that it is even used in medical diagnostic procedures. Although SF6 is not categorised as a hazardous chemical, when it is concentrated in poorly ventilated places it displaces oxygen creating a risk of asphyxiation. Because of its high density, this is particularly so in low-lying areas.

SF6 Gas in Electrical Switchgear

Sulfur hexafluoride

has been largely used as an insulation and switching medium for electrical switchgear. However, SF6 is a very powerful greenhouse gas and there are environmental issues related to its usage. This has brought about a phase out of the use of this gas in electrical switchgear. Due to its high global warming potential of 22,200, it contributes to the manmade greenhouse effect, this is why there has been ongoing research by ABB in an attempt to develop possible alternatives which have a minimal environmental impact while having insulation and arc interrup-

tion properties similar to those of SF6.

Gas-insulated switchgear

ABB has launched an eco-friendlier medium-voltage gas-insulated switchgear (GIS) range with its AirPlus formula. The new fluoroketone-based gas mixture delivers the reliability of ABB's proven switchgear range with a global warming potential (GWP) of less than 1 – 99.99 % lower than SF6, making it a more far more environmentally friendly alternative with minimal ozone depletion probabilities.

“We are using an SF6 alternative gas mixture as the insulation medium for our switchgear that has a GWP almost 100 percent lower than SF6. Moreover, we retain the quality and reliability and compact footprint that our customers expect from a market leader.” Bruno Melles, managing director of ABB

Although the new GIS range has an adequate current interruption performance, SF6 is still superior. Therefore, GIS will first be deployed for applications with a nominal voltage up to 170 kV where typical short circuit currents are below 50 kA.

Afrox gas equipment to be manufactured in Europe

ROBERTO Dionisio, Head of Research and Development at Afrox Integrated Customer Solutions explains that the recent decision by Linde to move the manufacturing of Afrox's gas equipment from South Africa to Europe will guarantee that Afrox customers will receive the best possible quality products, and although manufacturing has moved, there is still a strong after-sale service and technical support offered through the local Afrox

Research and Development Department.

Dionisio adds that Afrox is still responsible for all research and development activities around Afrox gas equipment products, with components meeting the approval and high testing standards set by the Afrox Research and Development team before being sent for international certification.

“With the relocation of manufacturing to Italy, these products have been re-certified

to ISO2503,” says Dionisio. “Furthermore, Afrox is in the position of being able to offer the highest levels of after-sales service available, as testing and repairs are still carried out in South Africa and the products are held in stock here for expeditious delivery and exchange if under warranty.”

The Afrox gas equipment that is now been manufactured in Italy, includes single-stage and multi-stage regulators from the well-recognised Afrox range.



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When fair discrimination becomes unfair

By Dylan Cunard,
Director at
Werksmans Attorneys

WHILE it is well established that one of the purposes of B-BBEE is to address historical imbalances or patterns of past discrimination in South Africa, the fact that B-BBEE is based on a flawed race based categorisation from the Apartheid era means that there will always be challenges in applying it.

This is all too evident in determining who is "Coloured" for the purposes of B-BBEE where there is still confusion among B-BBEE rating agents and practitioners.

This confusion continues to lead to discriminatory practices which unfairly prejudice South Africans of colour.

The process of determining who is "Coloured" will presumably become more challenging as South Africa becomes further ethnically integrated (with more children born of mixed parentage) and more globalised.

For example, there is reportedly a view among some B-BBEE rating agents and practitioners that a South African citizen born after 1994, who has an "African" or "Coloured" father and a "White" mother should be classified for B-BBEE purposes as "Coloured", whereas if they had a "White" father and an "African" or "Coloured" mother they should be classified as "White".

Some have alarmingly even reportedly taken the view that where a child

has a "White" father and an "African" or "Coloured" mother, the child should be classified as "White" unless the child looks more "Coloured" than "White".

This confusion has presumably arisen because the racial classifications which were created under Apartheid are still referenced in B-BBEE legislation.

The term "black people" is defined in B-BBEE legislation as –

"a generic term which means Africans, Coloureds and Indians- (a) who are citizens of the Republic of South Africa by birth or descent; or

(b) who became citizens of the Republic of South Africa by naturalisation-

i. before 27 April 1994; or

ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalisation prior to that date".

However it does not define the terms "Africans", "Coloureds" or "Indians" referred to in the definition of "black people".

The legal classification as "Coloured" originates from the Apartheid era Population Registration Act which included anyone whose parents were designated as "Coloured" or who had one parent designated as "White" and one parent who was designated as "African" or "Coloured".

In applying the Population Registration Act, vague factors such as appearance, habits, mode of life and "general acceptance" by a particular ethnic group

were also taken into account. In other words, it was never completely clear how the classification should be applied in the first place and attempts to apply it at the time resulted in tests which were absurd, inhuman and degrading.

The above practice by B-BBEE rating agents and practitioners clearly discriminates against "African" and "Coloured" mothers on the grounds of their sex, which is prohibited under the Promotion of Equality and Prevention of Unfair Discrimination Act.

Under this interpretation, "African" or "Coloured" men are free to have children with whomever they choose without fear of their children losing their preferential B-BBEE status, while "African" and "Co-

loured" women, are penalised if they have children with "White" men by depriving their children of preferential B-BBEE status. There is no apparent justifiable reason for discriminating against "African" or "Coloured" women or their children in this way.

If anything the rights of "African" and "Coloured" women have been identified as being particularly vulnerable in our society and they have in some instances been awarded greater recognition than those of "African" and "Coloured" men. The practice may also discriminate against the relevant children on other grounds which are listed in the Act such as race, birth, ethnic or social origin or colour.

The inadequacy of the definition of

who should qualify as a "black person" was successfully challenged by the Chinese Association of South Africa in June 2008 when they won a victory in the High Court to extend the definition of "black people" to include South Africans of Chinese origin (who were classified as "Coloured" under Apartheid) despite initially facing opposition from various government ministries and professional organisations.

While a system based on racial classifications is unavoidable in the B-BBEE context, a clearer definition of who is "Coloured" and consequently entitled to the benefits of B-BBEE, would at least help to minimise (if not eliminate) some of these alarming practices.

Advice for alternative water heating

WITH the latest tariff hikes placing more pressure on consumers it is becoming increasingly important to find alternatives for the largest energy consuming appliances in the home. This is according to Cala van der Westhuizen, Head of Marketing and Sales at Energy Partners Home Solutions, a division of Energy Partners and part of the PSG group of companies, who says that water heating accounts for as much as 50% of a household's electricity use.



"Replacing a home's conventional geyser with a renewable energy alternative is one of the first steps to drastically reduce an average home's monthly electricity spend. The current renewable energy powered water heating options available to homeowners are heat pumps and solar water heaters."

He explains that a heat pump uses energy from the surrounding air to heat water, while a solar water heater relies on the sun for power. "Both of these options are a good energy-smart investment, but each holds different advantages and disadvantages," he says.

Van der Westhuizen notes that understanding the major differences between the two systems will help homeowners to choose the system that is right for them.

"A solar water heater is much easier to in-

stall than a heat pump, and the total cost of an average 200l system is around R 26 000. In the short-term, this is cheaper than an average heat pump with a 300l efficient tank system, which costs around R35 500," he explains.

Solar water heating systems can also be expected to last for over ten years, while heat pumps generally need to be replaced after five to ten years.

Van der Westhuizen says that despite initial upfront costs, heat pump systems have significant advantages over solar heating. "A solar panel needs to be oriented towards the sun to operate at maximum efficiency, and when there is no direct sunlight on the system, like at night or on an overcast day, the system relies on a regular geyser element. As a result, the efficiency of a solar heating system fluctuates between 45% and 70%. This comes down to an average drop in energy costs by approximately 54% over the course of one year."

In contrast, a heat pump system is only slightly affected by variations in temperature, and therefore it runs efficiently at any time of day, says Van der Westhuizen. "It requires approximately one-third of the energy of a conventional geyser to heat the same amount of water, resulting in an average energy saving of up to 70%. This results in a cumulative cost saving of around R62 500 for a standard four member household using an average of 52l of warm water per person over a ten year period. By comparison, a solar heating system achieves around R59 500 in savings under the same conditions," he adds.

Van der Westhuizen says that Energy Partners Home Solutions recommends installing heat pumps to the majority of their clients in the Western Cape and Gauteng. "It is more efficient than an electric geyser and leads to bigger electricity savings over the long term than a solar water heater. These regions also receive less sunlight during their respective rain seasons, which means that a solar geyser will use a lot more electricity from the national grid," he says.

Heat pumps are consistent, rely on air and can cut the cost of water heating by more than any other system currently on the market," Van der Westhuizen concludes.

What are the risks of allowing the use of smartphones at the bank?

"USING smartphones at a corporate enterprise might seem like the most routine habit in the world but sometimes these smartphones are being used as a way to gain access of the enterprise's Wi-Fi and sensitive data" says Carey van Vlaanderen, CEO at ESET South Africa. In fact, today, corporates such as banks, prohibit the use of cell phones in their premises. Banks carry the most highly sensitive information and are prone to being thought of by hackers – but this applies to all corporates, from small to large.

Putting ourselves in the shoes of an attacker, the first thing we'd try to do would be to see if we could connect to any of the Wi-Fi networks that the organisation in all likelihood has. It would not be unusual to find a number of networks within range, and it's probable that at least one of them would be identified as belonging to the organisation or as exclusively for staff.

What you'd be less likely to see these days would be if those networks did not require a password or if they were using an obsolete encryption system like Wired Equivalent Privacy (WEP) – it's not 2010 anymore and most of the Wi-Fi networks we would have in range would use WPA2 encryption or better.

In these circumstances, the chances of being able to access

this corporate network from our cell phone are considerably reduced, although there is still the possibility of the attacker succeeding if there is a guest network that is not configured correctly. Guest networks are precisely that: networks that provide connectivity to people visiting the place temporarily.

The possibility to launch an attack from a cell phone connected to a bank's Wi-Fi network will depend largely on what security measures it has implemented. Generally, security tends to be robust. However, as we will see below, there are other methods of attack using cell phones and other devices.

Gathering information about the environment

Once the attacker has established that there is nothing they can do through the Wi-Fi network, they will probably use their smartphone for other purposes. One of the simplest ways, but which is very useful for gathering information, consists of using the cell phone's camera to take photos and videos of anything that might be of interest to the attacker.

Capturing images showing which software is used by the employees, which ports are accessible on the PCs used when serving customers; any network outlets that



might be accessible, identification plates, or even filming when and how the security guards change shift—all these actions can be very useful for someone planning a future attack.

Furthermore, if the device has Near Field Communications (NFC) capabilities, the attacker can try their luck and see if they can capture the data from any staff ID card which might give them access to restricted areas used only by employees. This would be risky when it comes to actually entering the area, but it wouldn't be the first time somebody tried it.

Moving on to more specialized types of devices, one kind available is known as a "WiFi Pineapple", which the attacker can use to create a fake access point and see if any employees try to connect to it, monitoring their connections, and trying to capture passwords for accessing the bank's internal systems.

Otherwise, they could try to pass themselves off as a customer and approach an em-

ployee with some kind of query, in order to then take advantage of a moment of carelessness when, if the employee's computer has a USB port free, they can plug in a "Rubber Ducky" device, which then executes the commands necessary to steal as much information as possible.

They could also try to get the computer to download some malicious code from an online archive pre-configured by the attacker, using for such purposes either a ready-made payload or one they created themselves.

Remote attacks

All of the above involve one major hurdle for the attacker, and that is that they would have to go in person to the actual branch of the bank they want to attack. The security cameras could be used against them if the video recordings are analysed after discovering the attack, and for that reason, attacks that manage to infiltrate banks' and other companies' corporate networks tend to be executed remotely.

Remember our pebble bed nuclear reactor, and weep

Continued from back page

The fact that pebble bed reactors are undoubtedly the coming thing in nuclear power technology – cleaner than coal, more reliable than wind or sun power, better than battery technology for years to come and, being modular, affordable, and able to expand with demand.

Indeed, China embarked on developing PBMRs at the same time as South Africa, and actually built one. Needless to say it is well in the running to win the UK prize.

Ah, says the Green Blob, anything nuclear is unsafe – the general public and ignorant politicians nod their heads, believing mendacious anti-nuclear propaganda.

It really is extraordinary how the facts have not been allowed to get in the way of the Green Blob propaganda. We

are told daily by the main stream media that anything nuclear is dangerous, that it poses insurmountable problems of safely disposing its waste, and as a final scare, we are enjoined to remember Chernobyl and Fukushima.

None of such claims are true. Nuclear power stations have a better safety record than any other method of producing base-load electrical power of the kind that drives heavy industry essential to a modern economy.

Conventional nuclear power stations produce molehill amounts of waste compared to the mountains left behind by coal fired ones. The small-to-medium size reactors that are being developed and used in some countries produce even less.

Solar panel manufacture produces

highly toxic waste and the panels themselves don't work at night or well on cloudy days. Same goes for wind generators that scar the landscape. Backup diesel generators or gas turbines have to be on standby all the time (Greens fail to see the irony).

Were solar and /or wind to replace coal and nuclear methods, the amount of land needed would devastate the landscape Greens purport to be protecting – incidentally, dwarfing the impact of fracking wells.

Rationality and logic is abandoned in this Gadarene gallop towards an energy system that is causing misery to poor people, as the costs of electricity produced by "Green" methods makes electricity unaffordable, even in rich countries like Germany, not to

mention the stress levels of engineers managing national electricity grids as they battle to balance the system forced to accept an erratic supply.

The tearing of hair and gnashing of teeth by the Green Lobby over the US decision to withdraw from the Paris Agreement on Climate Change is constantly in the news, but what is not said is that it is a false feed-good consensus at best, with most of the developing economies like India and China exempt from the restrictions on carbon dioxide emissions, and many smaller countries only agreeing to sign in the expectation and promise of huge transfers of money from developed nations to their own coffers.

Turkey's recent blunt demand to see the promised cash or it too will withdraw is a case

in point.

Alas, the sad story of our own pebble bed reactor is but one example where green ideology has triumphed over reason and truth. That it should have won in a developing country like ours is nothing short of criminal.

The only glimmer of light amid this darkness is that Eskom – for all its faults – has now woken up to the potential economic benefits of uranium pebble fuel and is now rumoured to be setting aside funds for developing our own pebble fuel manufacturing abilities.

If it comes to pass, we shall be able to sell fuel to all the other PMBRs that will soon come on stream in other parts of the world.

It will also deal a blow to the anti nuclear zealots and a strike for rationality and good sense.

Ensure your power backup doesn't let you down

By Kevin Norris,
Consulting Solutions
Architect, The Jasco
Group

POWER problems are a reality in South Africa for the foreseeable future, and many organisations have implemented solutions to minimise downtime and ensure business continuity. One of the most common solutions that people turn to is the use of an Uninterrupted Power Supply (UPS) with battery backup. UPS systems can provide enough time to safely shut down equipment that may be damaged by sudden power cuts, they can provide continued power supply to the load while a transfer from utility supply to standby generator power takes place, or they can supply the extended backup time required for the duration of the power failure itself. Essential to the success or failure of a UPS system, however, is the battery bank.

Unfortunately, many organisations fail to take into account the specific planning, installation and maintenance required by batteries in standby mode, to ensure that they deliver the required power to the load, and don't fail when they are needed the most.

Battery systems need to be engineered to the type of application they are being utilised for, for example, you cannot use just any battery off the shelf for UPS applications. Batteries need to meet the demanding re-

quirements of a standby power environment.

Typical standby batteries, called Deep Cycle batteries, need to be charged according to the manufacturer's specifications. As most modern-day battery systems are of the maintenance-free type, your typical quickest typical recharge time is approximately 10h. This is usually the fastest recharge time one can expect, and most average UPS systems have a slower recharge time. One of the design requirements for a battery system is to establish how much backup time the customer requires and how much time they need the battery to recharge back to full capacity, based on the type of UPS being specified. Once this has been established, there are three fundamental conditions that will directly affect the life span of a battery system:

Temperature

Most standby batteries are performance rated at 20°C. For every 10°C that the battery operates at above the 20°C mark, a half-life aging takes place. For example, the most common standby battery used in UPS applications has a specified lifespan of 3-5 years, however if it is operated at an average temperature of 30°C, the life-span reduces to between 18 months and 2,5 years. The temperature of the environment in which the batteries operate in is critical to the expected life-span

and performance of the battery bank. The battery banks must be installed in a clean, cool or temperature controlled environment.

Discharge Cycles

One full discharge down to 80% depth of discharge (20% battery capacity remaining) and a full recharge back to 100% charged state is considered a cycle. Typical UPS deep cycle batteries only have a cycle limit of between 200 and 500 cycles. In a situation where a power failure occurs once per month, that is 12 cycles per year, a 200-cycle rated battery would last its intended 3-5 years without any problem. However, where daily load shedding occurs, a battery would not last a year. Monitoring the number of charge and discharge cycles the battery is subjected to over a period of time is essential to understanding the expected life-span of a battery and when it should be replaced.

Charge Method

By the very nature of its application, Deep Cycle UPS batteries are usually float charged, awaiting the next discharge to take place. There could be months between discharges, which means that there is very little activity taking place within the individual battery cell chemistry. This can result in cell impedances differing slightly between each other and, as a result, cells accept-

ing a different charge current from each other. Or, over the multiple number of battery blocks that make up a UPS battery bank, some battery blocks will be at a higher voltage and some at a lower voltage, which, if left unattended, could result in some battery blocks over charging and some under charging. In both cases, if left un-managed, the battery block will fail during discharge, and the UPS will be unable to provide continuity of supply during critical power failure periods.

On the opposite scale, if the battery bank is floated at too high a voltage for too long a period, the battery blocks will start to gas and over-heat, resulting in permanent damage to the battery blocks. As most Deep Cycle batteries are typically "maintenance-free", as they are either sealed or semi sealed, there is nowhere for the gasses to vent. This causes a gas build-up, distorting the battery housing and permanently damaging the battery.

If the battery is floated on too low a voltage, the individual cells will not be chemically stimulated correctly, causing a reduction of capacity and internal sulphation of the cells. Ultimately the electrolyte fluid becomes less able to conduct the charge current, and eventually one will be unable to recharge the battery block.

Proper UPS system design is critical to ensuring maximum functionality is achieved. In

fact, a poorly designed system could destroy the batteries in as little as a few months, and since a battery is around half of the total cost of a UPS solution, this can be a costly error.

In addition to correctly designed systems, it is also essential to ensure that batteries are proactively monitored and maintained in order to address any issues before they can become problematic. For applications where uptime is mission critical, such as for hospitals, financial institutions and security organisations, it is recommended that a permanent online monitoring solution be installed on all batteries. These solutions are self-contained, meaning they will not be influenced by other equipment, and will manage and measure all relevant aspects of the battery, proactively sending out alerts to possible failures or issues.

Permanent, proactive battery monitoring solutions make use of historical data that is continuously monitored, to assess the status of the quality of the batteries in the field. By applying this methodology, one can immediately determine the risk associated with the possibility of batteries failing. This ensures that battery backup is continuously maintained at optimal levels, and will never fail without warning, preventing the potentially catastrophic consequences of such an event.

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Uncovering more recent history

Well then," remarked Colin the Golfer all bright-eyed and bushy-whiskered, "we haven't saved the world then, did we Boy?"

He was referring to the previous meeting of the Grand Old Order of Delicate Discourse (GOODD) in the local Pub & Grill, when that subject was the only item on the agenda. The Golfer's observation was therefore a legitimate progress report, but the other members of our gregarious gathering still experienced it as somewhat unkind, given the enormity of the task.

Irene the Queen, who, as her husband sometimes reminds us, has the not always endearing habit of remembering things, made us feel better by cutting Colin the Golfer down to size. "It was not the world we were going to save, Dear Colin," she reprimanded the miscreant, "it was the country."

The Governor, observing that I was not going to be tricked into calling for order again, shouted "Order please, ladies and gentlemen!" and assisted Angie the Angel, our much-appreciated bar tender, in redirecting the attention of the assembled connoisseurs to the magic of the brew master and the art of the distiller. Everyone paid for themselves.

A contented silence followed. "So what are we going to do about it?" insisted Luke the Dude, who lacks the wisdom of the late John Lennon to let it be.

The Prof of all people, usually a font of wisdom, came to his assistance by declaring, "Heaven knows, my dear fellows and ladies, we should not endeavour to draw too fine a line because, as the dire need for saving goes, the world and the country both qualify summa cum laude."

"As you say it, so it is, Mon Chef," enthused Jean-Jay, "The world, it is not safe for decent, peace-loving people while the Little Rocket Man and that other bully boy, Donald the Box, are strutting on the same playground. Mistakes happen when boys will be boys, as you say, and very nearly did happen when Lover Boy Jack Kennedy played with the red nipple or how you say it, red button. In the end even that peasant Nikita Khrushchev, that one, was the grown-up in the room. This time the playground she has no adults. Teacher strike."

"Reminds me of South Africa," philosophised Luke the Dude.

"Useless!" confirmed Jon the Joker, "when they don't strike, they simply don't turn up, particularly on Mondays. And when they do pitch, they molest the children!"

"There you go again," despaired Big Ben, "generalizing all over the place. You are a general disaster, that's what you are. Only a few exceptions abuse their positions."

"If only!" disagreed Jon the Joker, "and it's not their positions they abuse, it's the children placed in their care. Of course not all children get raped and of course not all teachers do it, but it is nothing to be complacent about and let me remind you, Mr Esteemed Member of the African Nat Congress, that only one assaulted child is one too many!"

"I am no longer a member of the ANC," exploded Big Ben as if everyone is supposed to know his secrets and affiliations, "but I have every intention of rejoining once Jacob Zuma goes!"

"Better stock up for a long wait, Boy," opined Colin the golfer.

"It is a sad fact," mused The Prof from his usual seat under the 'No Smoking' sign, "that of all the failures committed by the ANC, their mismanagement of the education system is the most damnable."

Pausing to light his pipe for effect, he concluded, "It is the children of this nation, particularly those children who can least afford a poor education, who are the victims. That is an unforgivable government failure."

"Wait a minute," protested Big Ben, the former card-carrying ANC member, "nobody says the government is perfect and maybe some books arrive late ..."

"Six months late! And that's in a good year..." interrupted Jon the Joker.

"Let me finish," growled Big Ben, "that is not the point. The point is that the vast majority of our school children are better off than they were with Bantu Education. I mean, Verwoerd did not want black kids to go beyond standard 2 and even that was inferior to what the white kids were taught in the same standard. White education got much more cash than Bantu Education."

Everybody seemed to agree with that, but The Prof remained in a contrary mood on that otherwise lovely Spring evening. "Really?" he queried, "I happen to know that when the finance ministers of the time, even long after Verwoerd, delivered their annual budget speeches, the allocation for black education was consistently higher than for white education."

"Are you sure, Prof?" doubted Luke the Dude. "My laities are taught that Verwoerd was a really bad oke, so bad that he could not possibly have been intelligent, and his successors got even worse."

"Of course I am sure," nodded The Prof, "but don't take my word for it; let's hear if our learned friend, young Robert here, can enlighten us on the subject."

"Well," smiled Bob the Book modestly, "as it happens, I recently encountered another side of this story, written by independent economist Adam Jacobs. His research included a thorough interview with Dr J. Greyling, who was Dr Verwoerd's appointee to head the first department of black education. Greyling was a former missionary and spoke Xhosa fluently."

"Not another lecture," groaned Big Ben.

"With a bit of luck you'll learn something Boyo," advised Colin the Golfer.

"Useless!" glared Jon the Joker.

"Now now," argued The Prof, "we have listened to your version, Benjamin; surely you don't wish to censor a second side of the story, do you?"

Big Ben downed his beer, got another and sat down.

"Okay then," said Bob the Book, "with the exception of some brave efforts by the churches, there was no formal education for black children before the Fifties. Verwoerd, a former university professor and newspaper editor, became the Minister of Native Affairs in 1950. An immediate problem was the serious housing backlog caused by urbanisation since the end of the World War. His state housing scheme built about a million houses of brick and mortar for black people within three years, by Jacobs's account.

"Next came black education, which was important to Verwoerd as he believed the independent homelands of his apartheid ideology would need the knowledge and skills of well educated and trained black people. At first, his plans for the extension of compulsory education to black kids met with strong resistance, particularly in rural communities where it was unknown and seen as unnecessary interference by the white government.

"So it was decided to work, initially, towards standard 2 as a compulsory minimum. Nobody was limited to standard 2; that was the minimum target."

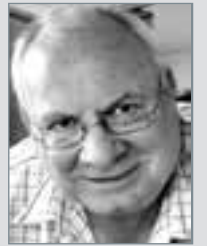
"Wellll..." wavered Big Ben.

"About 10 000 classrooms per year were built," continued Bob the Book, "and after ten years some half a million black children attended school. To meet the demand for teachers, white, mostly Afrikaans, teachers were appointed in large numbers. Although teachers' colleges were built to train black teachers, the shortage remains to this day.

"This massive programme was supported by civil society and charities. The Star newspaper in Johannesburg had a very successful project to raise funds and build schools. Of course, when the schools started going up in flames, the inflow of funds stopped. Hundreds of schools were burned down in the liberation before education idiocy promoted by the

OPINION

ON THE CONTRARY



Pieter Schoombee

ANC and its comrades. Teachers were driven off in fear of their lives."

"Now wait a minute," bristled Big Ben, "the Nats caused all the anger by insisting on teaching in Afrikaans. Why don't you mention that?"

"Okay, seeing that you mention it," agreed Bob the Book, "here is a relevant statistic. Out of the seven schools where the Soweto uprising started on 16 June 1976, six used only English. At the seventh only one subject was taught in Afrikaans."

"But Bantu Education was inferior," insisted Big Ben.

"Inferior to what?" rhetorised Bob the Book. "A matric certificate in the hands of a black person meant as much as a matric certificate in the hands of a white person. Compare that to the situation today, when matric does not guarantee even literacy or numeracy. Compared to ANC education, Bantu education was without doubt superior."

"That is what is so tragic," concluded The Prof. "It means a second lost generation of South Africans ill-prepared for earning a living. The first was lost to liberation before education and the second is being lost to uselessness after liberation."

Luke the Dude called for a moment's silence and everybody started arguing at once.

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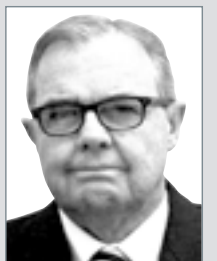
Remember our pebble bed nuclear reactor, and weep

A perfect example (among many) of our first-class ability to shoot ourselves in the foot) is the sad story of the pebble bed modular nuclear reactor (PBMR) we were developing and which was canned by the Government in 2010 who thought in its ignorance that alternate energy such as wind farms and solar panels were the answer to all our future energy needs. Government was persuaded that it should not be in the business of developing new nuclear technology. Yet, as a history of Sasol proves, we could have brought about the PBMR. The other factor is that after 1994, EarthLife Africa supporters were inside government.

There were other reasons, of course, but that was the underlying rationale. The result anyway was that we missed the bus of this cutting edge nuclear technology and allowed others to gallop ahead, taking many of our home-grown scientists with them.

As Keith Campbell of Engineering News pointed out our PBMR would have been the leading contender for the SMR competition recently announced by the United Kingdom.

THE OTHER SIDE OF THE COIN



Keith Bryer

We should be reminded about the whole sorry affair. The pilot PBMR was ready to be constructed at Koeberg. The then Director-General in the Department of Environment Affairs, had signed a positive Record of Decision (ROD) in 2003 and it was getting ready to roll, at a time well ahead of the competition.

Then the Green Blob struck.

Led by EarthLife Africa, these environmental evangelists launched a legal challenge before the Cape High Court and, on a minor legal omission, the permission to proceed was reversed.

That is how the PBMR project was destroyed, and why South Africa is not the front-runner in the bid to build SMRs in Britain and create a money-making and tax-paying industry selling to the world.

For the 800 or so people working on the PBMR, it destroyed their lives and careers. Many left the country and are now, if they are lucky, working on pebble bed reactors for other countries.

Continued on P35

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