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## Tapping alternative water solutions

THE sustainability reports of large companies are probably not widely read – at least by shareholders, who are probably more interested in the financial statements that reflect the profits (or losses) of a company's endeavours.

But there may be considerably more eyeballs focused on the sustainable reports within annual reports of larger Cape Town-based companies now that the Western Cape is faced with severe water shortage challenges.

Latest reports suggest Cape Town's taps may be turned off during May – a development that will have a devastating impact on some businesses.

Businesses – especially manufacturing, food production and construction entities – are huge consumers of water. Fortunately some Cape Town-based companies have already taken proactive steps to manage (and minimise) water usage. No doubt more initiatives will be disclosed as other Cape Town-based companies publish their 2017 annual reports in the weeks ahead.

Low cost housing developer Calgro M3 was one of the first JSE-listed companies to address the water shortage in the Western Cape back in mid-2017.

The company – which is busy with several large developments in and around Cape Town – reiterated a commitment to building a sustainable environment. Calgro had already last taken a decision early last year to slow down construction in the Western Cape to assist in preserving water.

The interim report noted: "Education programmes with clients are in place to ensure they understand why water conservation is critical to the country and the environment."

Calgro CEO Wikus Lategan disclosed that water saving initiatives undertaken in the past six months had recouped the approximately 8 500 litres of water per unit used through the construction phase – both on and off-site – within three months after completion.

Lategan said Calgro would continue to develop and implement water-saving initiatives throughout project cycles.



He said Calgro was in the process of re-assessing all its sustainability policies to ensure compliance with the ever-changing operating environment.

"Independent consultants have been appointed to assist in this process and a full-time sustainability officer will be appointed to ensure best practice throughout the company at all times."

Hospitality and casino giant Tsogo Sun – which is controlled by Cape Town based empowerment group HCI – has also wasted no time in tapping into water saving initiatives.

Tsogo's recent interim investor presentation detailed R3.5m to be spent on water saving initiatives at some of its best known Cape Town properties – the Westin, the Cullinan and the Southern Sun at the Waterfront.

One of the inventive initiatives involves a reverse osmosis plant to make brackish water pumped from the Westin Hotel's basement potable.

Another R2.1m has been spent on boreholes and reverse osmosis plants at the

Radisson at the Waterfront, the Century City hotel property as well as the Protea Victoria Junction Hotel.

A further R4.1m will be spent on similar efforts at the Newlands Southern Sun, Cape Sun, SunSquare and City Bowl.

Tsogo is also setting up additional storage tanks at smaller hotels in Parow, Milnerton and the Foreshore.

Fishing giant Oceana was already implementing efficient water usage and augmentation measures – including desalination technology – to secure its wide ranging operations against water risks in the Western Cape.

CEO Francois Kuttel said there was a possibility of a reduction or potentially no fresh water supply to Oceana's factories as a result of continuous supply constraints following drought in the Western Cape.

He said the inability to operate plants at full capacity could mean reduced profit for Oceana.

Kuttel said the Oceana board had already approved the installation of two desalination plants on the West Coast.

Kuttel reported that action plans to reduce potable water usage had already yielded 17% reduction.

"This year we received our coastal water discharge licences from the DEA (department of Environmental Affairs) for all our lobster factories. Unfortunately the licences for our Lucky Star (the best-selling canned pilchards brand) operations are still outstanding."

Business Day reported last month that pharmaceutical giant Aspen's Cape Town-based subsidiary Fine Chemicals had invested in new infrastructure to be able to function should municipal water supply be cut off.

Fine Chemical's Epping-based plant is a major exporter of ingredients used in best-selling products, and the facility's closure could seriously disrupt other Aspen manufacturing operations.

Aside from sinking boreholes, Fine Chemicals has also acquired a water treatment plant that is expected to be up and running in April.

## Blindness no obstacle to a successful career



John Stephens at work and still studying!

THIS article reveals how senior costing clerk in the finance department at the Drakenstein Municipality in Paarl, John Stephens bounced back after losing all of his sight. He inspires others while further pursuing his dreams in the accounting profession. Despite having to adjust to new ways of working because of his condition, he is continuing his studies and is elevating his skills as an accounting technician.

The municipality gave Stephens an opportunity to further his studies by enrolling in a unique municipality-focused qualification offered by Accounting Technicians South Africa (AT[SA]), a designation offered by the South African Institute of Chartered Accountants (SAICA). Deloitte, the AT(SA) accredited training provider offering Stephens' LGAAC qualification, has gone beyond the call of duty to ensure that Stephens is able to complete the course successfully.

Now, at 52 years old, Stephens is busy with his Local Government Accounting Advanced Certificate (LGAAC). "I want to show that blindness must not stop anyone from having a fulfilling career, especially in accounting," he says.





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# Increasing retirement contributions will provide a reason to smile this tax season

INVESTORS who top up their retirement annuities to the maximum allowable limit before the end of the tax season will have a reason to smile in 2018. This is according to Tandisizwe Mahluthshana, Executive of Marketing at PPS Investments, who adds that individuals who want to maximise their tax rebates, need to act as soon as possible. "The current tax season come to an end on 28 February 2018, so the time to take advantage of the tax benefits in this financial year is quickly running out."

Mahluthshana explains that government has made it a priority to incentive South Africans to make adequate savings provision for their retirement, which is why retirement annuities now offer individuals a number of significant tax benefits. Firstly, a portion of the money that individuals invest throughout the year can be claimed back from SARS, and any returns on investment that are gener-

ated by an annuity are not subject to income tax, capital gains tax or dividend withholding tax."

Mahluthshana explains that government has recently increased the amount that individuals can claim back from the taxman if they opt to pay extra money into their annuities. "Since the 2016 tax year, SARS (through government legislation) has made it possible for individuals to invest up to 27.5% of their annual income in a retirement annuity. Taxpayers can claim those contributions back on their tax return, up to a maximum tax deduction limit of R350 000."

With the end of the current tax season nearing, Mahluthshana explains that individuals still have an opportunity to maximise their savings and tax rebates if they move quickly.

"I would advise anyone with any funds available to make a lump sum payment into their annuities in order to get as close to

the 27.5% mark as possible."

Mahluthshana notes that the possible benefits of increasing retirement annuity contributions in this way can be demonstrated practically. "Consider a 40-year-old investor with an annual salary of R600 000, who decides to increase his retirement contribution from 15% to 27.5% of his annual salary. His retirement savings could potentially be boosted from R4.4 million to R8.1 million in real terms."

The said investor would also be able to reduce his annual income tax liability. "When the investor's retirement contribution was at 15%, he qualified for an annual reduction in taxes of R33 732. In comparison, increasing retirement contributions to the maximum of 27.5%, reduces annual income tax by R60 732.

Reinvesting those tax deductions into the retirement fund could also be used to cover the tax implication when he makes with-

drawals or receives an annuity income at retirement."

According to Mahluthshana, individuals with the means to do so, can even consider paying a higher percentage of their salary into their retirement annuity. "While it is true that you cannot claim back more than 27.5% of your annual salary back from SARS when it comes to retirement annuities, SARS has made one more benefit available to taxpayers.

If you pay more than the permitted annual contribution in a tax year, you are allowed to claim the remaining percentage back in the following year. That is to say, if you invest 35% of your annual income in your annuity, SARS allows you to claim back 27.5% this year, and add the remaining 7.5% to your following year's tax return."

Lastly, Mahluthshana encourages the use of a tax free investment account. "It is something that we would encourage every South African to exercise.

It allows you to save money with zero tax on investment income or growth. You can invest up to R33 000 per tax year until you reach the lifetime limit of R500 000. While it should not be your sole source of retirement savings, it is one of the best ways to boost your nest egg with a lump sum. However, it's important to carefully monitor one's contributions to this type of account. There are significant tax penalties attached to exceeding the annual or lifetime limit, which can actually erode the value of your investment."

To encourage individuals to top-up their retirement annuities before the end of the current tax season PPS Investments recently launched its #reason-to-smile campaign. The campaign practically demonstrates the pay-back that taxpayers can expect from topping up their annuities, giving them a reason to smile. To find out more about the campaign visit [www.reason-to-smile.co.za](http://www.reason-to-smile.co.za).

## dmg events acquires suite of exhibitions and supporting media from Hyphenica

Acquisitions boost business foot print in important African markets, leveraging international reach and existing sector expertise



**Matt Denton, President**  
– dmgevents Middle East, Asia & Africa.

"We know Africa is a key geography for the future growth of our business, as well as those of our exhibitors and visitors," said Matt Denton, President – dmgevents Middle East, Asia & Africa. "Adding these five events and the ac-

companying respected trade media to our portfolio is an excellent way to expand our regional reach, enabling us to leverage our sector expertise in new markets."

The acquisition of African Construction Expo, Cape Construction Expo and KZN Construction Expo are a natural fit within dmgevents' existing construction portfolio. African Ports Evolution Forum and African Ports Evolution Forum – West Africa add a complementary transport element that has a natural affinity with the company's existing customer base across industries such as construction, mining, power and lo-

gistics. Finally, Concrete Trends and its digital platform [www.concrete.tv](http://www.concrete.tv) gives dmgevents an established channel through which to support the events as well as deliver great content and up to date business information all year round.

"Africa is a hugely important market to us so it's only natural that we will continue to look for ways to invest across the continent, either by geo-adapting existing brands, or making astute acquisitions from capable, successful businesses just like Hyphenica," said Denton.

KZN Construction Expo will be the first event to take place under new ownership,

with the exhibition set to kick off in Durban, South Africa, on February 7 2018, followed swiftly by the African Construction Expo in Johannesburg in May. dmgevents will start to add its distinctive touches to the events right away, building up the knowledge sharing, networking and business matching opportunities that have set its existing brands apart, as well as using its reach to bring in more international visitors and exhibitors.

"It is great that we have the opportunity to see the brands we've worked so hard to create get taken to the next level by a great operator like dmgevents," said

Devi Paulsen-Abbott, CEO of Hyphenica.

"The company's approach to doing busi-

ness suits our own company culture and the obvious synergy between our events will

have a huge impact on the benefits the events offer to exhibitors and visitors alike."

### About dmgevents

An international exhibition and publishing company, dmgevents produces market-leading exhibitions and conferences for the global energy, construction, coatings, hospitality and interior design industries.

dmgevents is a wholly-owned subsidiary of the Daily Mail and General Trust plc (DMGT) an international portfolio of information, media and events businesses listed on the London stock exchange.

### dmgevents Middle East, Asia & Africa

Founded in 1989, dmgevents has operated in the Middle East since 1995 and owns many leading brands including The Big 5 portfolio of construction events, INDEX – the Middle East's largest event for the interior design industry and The Hotel Show, the longest running and most important event for the hospitality industry.

Headquartered in Dubai, UAE and with satellite offices in South Africa and the UK, dmgevents Middle East, Asia & Africa organizes over 50 events across the Middle East, Africa, Asia, North America and Europe.

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# Kaap to Cairo?

**WESTERN** Cape-based farming services specialist Kaap Agri – sometimes referred to as the ‘Boere Massmart’ because of its successful retail endeavours – is growing its retail footprint at a rapid rate.

Several years ago Kaap Agri was earning almost all its keep from operations in the Western Cape.

But a recent presentation covering its trading period to end September 2017 showed that operations have been spread far and wide with considerably less reliance on the Western Cape.

Kaap Agri still has 132 operating points across the Western Cape – which account for the lion's share of revenue.

But the company now also boasts 10 operating points in the Eastern Cape, nine operating points across Limpopo, Mpumalanga, Gauteng and North West as well as 25 operating points across the Northern Cape.

Kaap Agri has also established 18 operating points across Namibia.

In total Kaap Agri now has over 190 operating points located in seven of the nine South African provinces and Namibia. This is a far cry from the businesses formerly known as WPK and Boland Agri, the co-operative entities that were merged to form Kaap Agri back in 2004.

The success of Kaap Agri in the last 12 years has been largely driven by the retail thrust via the Agrimark ‘farming store’ brand. More recently that core retail offering has been successfully enhanced by a convenience store offering and fuel sales.

A five year review will show that the expanding Kaap Agri has effectively doubled profits from 2012's R3.2bn – but without sacrificing trading margins (which widened from 16% to 17% over the period).

While the geographic spread is far wider, perhaps more impres-

sive is the sales and profit mix achieved in the year to end September.

Profit from trade (that is to say mainly the retail-inclined endeavours and packing services) notched up sales of R4.1 billion and profit before tax of R222m. That, by the way, represents a pre-tax margin of 5.4% – an achievement that would make most mainstream retail giants (like Massmart and Cashbuild) green with envy.

Sales from the fuel and convenience store hub came in at nearly R1.4bn with pre-tax profits of R64m. A margin of almost 4.6% is not too shabby either.

Grain handling business Wesgraan managed revenues of R710m with pre-tax profits hitting R52m, while irrigation services generated R181m in sales and pre-tax profits of R25m.

These achievements are made all the more impressive by the fact

that many of the acres serviced by Kaap Agri were suffering from one of the worst droughts in living memory.

Overall Kaap Agri increased the value of business transacted by 12.3% to approximately R8.6 billion with comparable stores growing turnover by 9.4%.

Kaap Agri CEO Sean Walsh said the growth in the value of business transacted was driven mainly by a 15.9% increase in the number of transactions with product inflation estimated at only 3.9%.

He said the strong revenue growth was testament to Kaap Agri's ongoing diversification and resilience.

Walsh noted that the retail income channel now accounted for similar trading profits as the agriculture income channel.

He said during the financial year nine new fuel sites were opened with total fuel volumes increasing by 10.9% in the year.

What also buoyed business levels was that the flagship Paarl Agrimark was successfully extended and upgraded to reflect what Walsh termed “our new urban-format retail offering”.

He said this continuing investment into the business boded well for sustained revenue growth going forward.

Walsh also disclosed that significant growth was realised in the fuel and convenience division with income growing 34.2% and operating profit before tax increasing 37.4%.

He predicted continued strong growth in this division.

Interestingly, the Wesgraan business – which includes grain handling and storage of grain and related products, seed processing and potato seed marketing – grew income by 27% and pushed operating profit up 69% as a result of increased wheat volumes.

Looking ahead to 2018, Walsh said agricultural conditions had



improved in specifically the northern areas of the country, but remained under pressure in the Western Cape with the Swartland grain producers expecting a decreased yield on last year.

But he reiterated that retail fuel growth remained an aggres-

sive part of Kaap Agri's expansion strategy.

“We will maintain and, in certain circumstances, accelerate investment into revenue-generating capital expenditure and the focus on improved retail and fuel offerings will positively impact results.”

## Avian Influenza update: Swift terns found to be infected

ALAN Winde, Minister of Economic Opportunities, recently announced that no new cases of Highly Pathogenic Avian Influenza (HPAI) have been confirmed at previously uninfected poultry farms in the province since 31 October 2017. In December, there was a reoccurrence at a previously infected farm which was still under quarantine.

Laboratory tests have however confirmed the presence of the H5N8 virus in swift terns found in Durbanville, Seapoint, between Bloubergstrand and Melkbosstrand, Kenilworth, and Stony Point, in the Western Cape. Other wild birds found to be infected in 2017 included guinea fowl, laughing doves, rock pigeon, pied crows, sacred ibis, blue crane, Egyptian goose, spotted eagle owl, peregrine falcons and a house sparrow.

The sick terns show signs of weakness and cloudy eyes and later develop head tremors,

lack of balance, walking in circles, seizures and death.

Minister Winde said: “Our Veterinary Services team have notified Cape Nature, BirdLife and local seabird rehabilitation centres of this latest outbreak of HPAI amongst wild birds, for further dissemination to relevant stakeholders.

“Members of the public are urged to inform their local state vet office (<http://www.elsenburg.com/services-and-programmes/veterinary-services-0#s=Animal-Health-and-Disease-Control>) or Cape Nature office if they discover groups of dead birds or sick birds. Members of the public should avoid handling sick birds, especially if they will be coming into contact with other birds or bird owners.”

There is currently no preventive vaccine or treatment for HPAI H5N8. Veterinary Services advises that there is also no benefit to be gained in attempting to control the virus in wild birds through culling or

habitat destruction.

The H5N8 strain of the virus has so far shown no sign of being infectious to people. Constant monitoring of exposed people in South Africa has supported this. However, people can spread the disease via their hands, clothes and vehicles.

Minister Winde urged poultry owners to remain vigilant and to maintain strict biosecurity measures.

“The halting of new infections in our poultry industry is positive news, but we must remain extremely cautious due to infections amongst our wild bird population. Restocking of poultry farms continues in Gauteng, and our vets are working with local farmers to make sure their houses are clean so they can start the restocking process.”

Poultry farms can be declared officially free of HPAI 42 days after the first effective disinfection. Once the property is declared HPAI free, the quarantine can

be lifted. To date, quarantine has been lifted on one commercial broiler breeder farm.

HPAI was first detected in the Western Cape in August last year. The total number of cases for the country now stands at 107,

of which 75 are in the Western Cape.

Since culling began, food prices related to poultry, a key source of nutrition for residents, have been impacted. Louw Pienaar, economist at the Department of Agriculture, reported

that the price of eggs in South Africa has risen by 16.9% when comparing November 2016 to November 2017: “The biggest price shock has been in the Western Cape, where the price of 1.5 dozen eggs increased from R38.42 to R42.66

between September and October of last year. A more detailed report from the Bureau for Food and Agricultural Policy (BFAP) on the economic impact of the outbreak is expected at the end of January 2018.”



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## Altitec South Africa opens its doors

ATLITEC opens Cape Town office to deliver turbine blade inspection and repair services using locally recruited and trained teams of expert rotor blade technicians

Altitec, the turbine blade access and repair specialist, has opened the doors on Altitec South Africa, following last year's signing of a joint venture with Obelisk, a provider of infrastructure services to the global renewable energy, telecommunications and power markets. Based in Cape Town, the new company will deliver turbine rotor blade inspection and repair services across Sub-Saharan Africa, and offer certified training courses to help new technicians enter the industry. The South African wind energy market has continued to grow rapidly in recent years and now comprises 19 operational wind farms with a total nameplate capacity of 1.5GW.

"Wind power has great potential to become a significant part

of South Africa's energy mix," commented Tom Dyffort, Managing Director, Altitec. "Despite recent delays in signing the Windrow 4 PPAs, the market is expected to see significant medium- to long-term growth in its installed capacity, and we are therefore investing now in the technical skills and job development needed to match future demand."

"Equally, and as markets across Sub-Saharan Africa expand, and the number of wind turbines and rotor blades increase, high quality blade repair and maintenance programmes will be key to ensuring this energy source delivers reliably."

### Jobs & Skills

Over the past 4 years, more than 100,000 jobs have been created by the industry in South Africa alone. Continuing in this vein, Altitec South Africa, under the guidance of Altitec's London team, will open a second Altitec Academy, offering its certified train-



ing courses and looking to attract new turbine blade technicians from across the continent.

Dyffort continued: "Leading up to the launch of Altitec South Africa, we have developed a strong relationship with Obelisk, benefiting from their experience and understanding of the local market to support our Europe-based turbine blade technicians as they serviced wind energy contracts for our clients in Sub-Saharan Africa. As the wind industry grows and matures across the region, this work will need to be delivered by local teams. Altitec South Africa will ensure our

clients can benefit from local expertise and experience."

The local entity will take advantage of Obelisk's experience in the wind turbine service industry to support three Altitec-trained rotor blade technician teams, as they start to deliver services directly from their new South African base. The joint venture will allow Altitec to deliver services to clients in the region more efficiently, particularly during the high season for repairs between January and April.

Riccardo Buehler, Managing Director, Obelisk Energy, added: "Since we first started working with Altitec

we have continually been impressed by their knowledge and expertise, and their ability to continuously raise the bar for rotor blade inspection and repair. We are excited to further strengthen our relationship with them and together start Altitec South Africa. Altitec's vast technical expertise on rotor blade services, combined with the experience of Obelisk in the Sub-Saharan Market, will allow us to provide high quality services to our clients."

Since 2010, Altitec technicians have provided regular inspections on more than 5,000 blades and 1,500 turbines throughout the UK, Europe and key emerging wind markets around the world. The Altitec Academy, first established at Altitec's headquarters in London, UK, is an industry-certified programme to teach inspection and repair skills to more than 180 new rope access blade repair and inspection technicians every year.

## China bans import of plastic waste

The use of plastic packaging needs to be addressed now

NEWS of China's ban on the import of plastic scrap has raised concerns for many businesses in Britain. Now, aluminium food packaging manufacturer, Advanta, is calling for food manufacturers to address the problem at the source. Analysis by Greenpeace states that the plastic waste the UK has been sending to China accounts for more than two-thirds of the UK's total plastic waste export — leaving UK businesses in trouble if changes aren't made soon.

On January 01, 2018, China implemented a complete stop to the import of plastic scrap, leaving Britain in a bind. Reports of this ban in the media state that, since 2012, the UK has shipped over 2.7 million ton of plastic scrap to mainland China and Hong Kong.

The news has caused widespread concern about how the growing piles of plastic waste will

be disposed of as Britain's recycling facilities do not have the capacity to handle the high volumes being produced. It is especially concerning as we deal with the additional waste from the Christmas period.

"According to the international body Waste and Resources Action Plan (WRAP), the UK recycles just 19 per cent of all plastic consumed," said Miguel Campos, export sales manager for Advanta. "When you also consider that plastic is a finite resource that has incredibly limited use, manufacturers have to take ownership of sourcing alternative materials for packaging that will reduce pressure on our waste management and recycling facilities — not to mention the negative impact on the environment."

"China is not the first country to implement sudden and tough new initiatives regarding



*Reports the newly implemented Chinese ban on plastic waste states that, since 2012, the UK has shipped over 2.7 million tons of plastic scrap to mainland China and Hong Kong.*

use or disposal of plastics in the last twelve months. In September 2017, Sri Lanka announced a ban on single use plastic and Kenya implemented what is said to be the world's toughest plastic bag ban earlier in the year.

"The Environment Management Agency in Zimbabwe has also ordered the food industry to stop using containers made from expanded polystyrene (EPS)

immediately. These initiatives have also arisen from a growing difficulty in disposing of waste plastic.

"It's not enough to pressure consumers to be mindful of what they throw away. Manufacturers and businesses need to provide shoppers with alternatives to plastic and reduce how much of the material is used altogether."

Aluminium provides an affordable alterna-

tive to plastic that has a much lower impact on waste disposal and the environment.

According to the European Aluminium Foil Association, Alufoil, aluminium not only provides an absolute barrier against moisture, light and oxygen to keep food fresh for longer, it also saves far more resources than are consumed in its production throughout the supply chain. In addition, 75 per cent of all aluminium ever produced is still in use thanks to its repeatable recyclability.

Advanta is the leading supplier of wrinkle wall and smooth wall foil trays for the UK's food manufacturing industry, as well as supplying foil trays to the sector in the US, Australia, Africa and across Europe. The company offers a bespoke design service to support customers and create packaging options to suit their requirements.

## AEI celebrates its 10th edition in 2018

THE African Energy Indaba (AEI) celebrates its 10th edition on 20-21 February, 2018 at the Sandton Convention Centre, Johannesburg, South Africa. This flagship annual event on the African business calendar correlates with the growth in African energy on the conti-

nent, as the AEI is well-renowned for its focus in exploring and expanding on solutions for the energy future of Africa.

Growth in African energy expansion rose from 32% in 2010 to 35% in 2012, but with only 25% of the population having electricity access, it is estimat-

ed that \$40.8 billion a year is still needed to meet the Africa's power sector needs. The 10th African Energy Indaba conference includes crucial side events representing and focusing on the issues that are highlighting energy potential and solutions on the African continent.

A case in point is the 5th Independent Power Producers and Power Purchase Agreements Conference (IPP & PPA Conference), an official side event that places focus on the huge international investor attention given to African energy projects.

The AEI facilitates

exhibits, discussion, debate and networking among African governments and companies in all areas, showcasing solutions involving major energy projects, rural energy solutions, urbanisation and energy needs, and the renewable & sustainable energy industry, and its management.



# New captain at helm of Marine Tech

THE Specialised Marine Services division of Sturrock Grindrod Maritime (SGM), Marine Tech, has a new man at the helm – Guy Sampson – who brings more than 20 years' maritime experience to the position.

Well known to the shipping fraternity in Cape Town, Guy has always admired the people centric and can-do philosophy of the Sturrock Grindrod family businesses and is determined to make a contribution of steering Marine Tech into the future under the same ethos.

"I am excited at the prospect of further developing this important aspect of the SGM group business and have the support of a team of professionals many of whom are seafarers and understand conditions at sea" said Guy.

"Marine Tech is the specialised technical procurement and marine engineering division of SGM and are the exclusive South African sales and ser-

vice representatives for a plethora of reputable international equipment manufacturers and global suppliers of high-quality products to the marine industry. These products, together with our in-house team of marine engineers, technicians and procurement spe-

*As seafarers' lives depend on the equipment they use, having it serviced by people who have been to sea... makes all the difference"*

cialists – all under one roof – means that our service know-how can be called upon either on-shore or on board, anywhere on the African continent" enthused Guy.

As seafarers' lives depend on the equipment they use, having

it serviced by people who have been to sea and understand the demanding conditions they face, makes all the difference and adds extra value to Marine Tech's customers.

Whether it is the servicing or repair to main or auxiliary engines, life boats, life rafts, firefighting or fire rescue equipment, Marine Tech have the trained personnel for the job.

Its procurement team is able to assist with the sourcing of all technical equipment and Marine Tech have a dedicated cargo hold and tank cleaning team that ensure vessel hatches pass inspection prior to loading.

Technical and procurement assistance can be supplied anywhere on the African coast and provide riding gangs to sail with the ship in cases where the port stay is too short.

It offers an accredited life raft and survival equipment services as well as repair facilities both in Cape Town and Durban, approved by

the US Coast Guard and the South African Maritime Safety Authority. This service is performed by its highly qualified and manufacturer-trained technicians.

As supply of potable fresh water to vessels calling at the Port of Cape Town was suspended about 4 months ago, what solutions can Marine Tech suggest to its customers?

"With the drought situation getting steadily worse in Cape Town, and having the agency for Gefico and the Cathelco range of on-board reverse osmosis desalinators, we are currently investigating making these units available for land based usage" noted Guy.

"The Cathelco equipment range caters for capacities of between 333l/h right up to 2 083l/h, making them suitable for residential and commercial use such as waterfront hotels, shops and restaurants.

"The units which come in nine basic out-



*Customer centric and hands-on. Guy Sampson, Divisional Executive SGM, Marine Tech.*

put configurations can be customized to individual specifications and are completely automatic in operation. Being intended for ship-board use, the units are ruggedly constructed, compact and durable with a small footprint in both modular and skid mounted arrangements. A comprehensive range of water sterilization systems are also available" he explained.

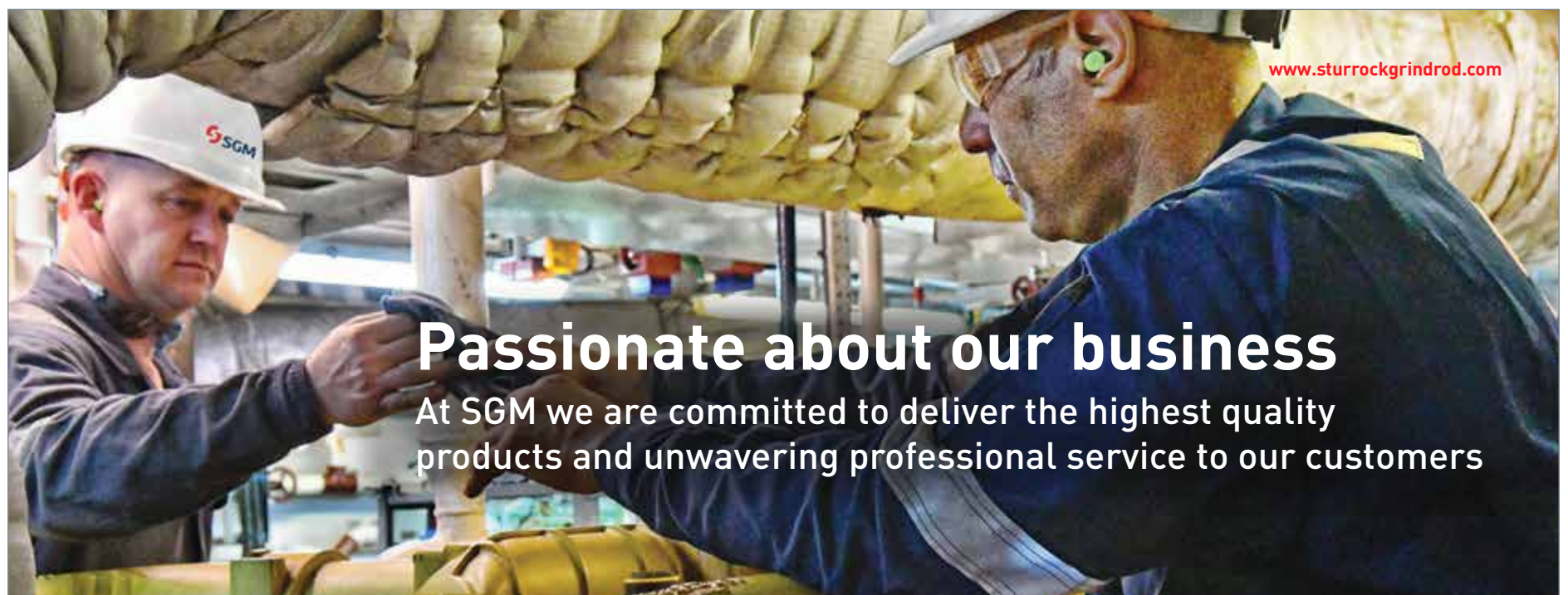
Other major product

lines available from Marine Tech include the Baudouin range of slow and medium speed marine propulsion engines suitable for fishing vessels and auxiliary and emergency generators from the same manufacturer. The Merus Ring water treatment agency protects water systems on ships and oil platforms from limescale, biofouling, algae and mussel growth as well as corrosion. C-Sheild,

also from Cathelco, is an ICCP cathodic anti-corrosion system recognised world-wide and installed on more than 6 000 vessels of all types.

SGM, Marine Tech is ISO 9001:2008 and TRACE certified (anti bribery and corruption), is a Level 2 B-BBEE contributor and provides ongoing comprehensive customer service and developmental training effort across the group. This emphasis on customer service has been the company's mantra ever since it opened its doors and its culture of developing its people's potential is a key element in its ethical reputation.

"With a product line up from some of the world's best manufacturers and a professional, highly knowledgeable and dedicated technical team within an organisation renowned for its customer centric culture, there is only one way for the fortunes of Marine Tech to go, and that is full steam ahead!" concluded Guy.



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A division of SGM, a Grindrod Group Company

**Guy Sampson**  
Divisional Executive, SGM Marine Tech

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**Maritime**



# Clothing Bank CEO invited to the World Economic Forum

AN NGO that trains unemployed South African mothers to be meaningfully self-employed received international recognition at Davos, Switzerland.

Tracey Chambers, Founder and CEO of The Clothing Bank, was invited to attend The 48th World Economic Forum in Davos as a guest of the Schwab Foundation.

In 2016 the organisation's co-founders, Chambers and Tracey Gilmore, were awarded the Schwab Social Entrepreneur of the year award in recognition of the work they do to develop unemployed mothers into viable small business owners in the retail sector.

The Clothing Bank

assists 800 unemployed mothers each year to journey out of poverty by training them to become informal clothing retailers. The Clothing Bank's two-year programme puts beneficiaries through intensive business, computer, life skills and personal finance workshops, training them to successfully operate their own business. The business model works thanks to strategic partnerships with most of SA's clothing retailers who donate their excess stock to the organisation. Beneficiaries buy this merchandise from The Clothing Bank and sell it in their own informal businesses.

Within two weeks of starting on The Cloth-



*L to R - Tracey Chambers, Alan Winde - Minister of Economic Opportunity and Tracey Gilmore.*

ing Bank programme the beneficiaries are running their own businesses. By the time the women leave they have established other sources of product to sell, or even other businesses like crèches, laundries or transport services, and they are financially independent, confident

women, earning on average R4 000/month. This is above the minimum wage with the added benefit of flexibility as most of the women have children.

The Schwab Foundation for Social Entrepreneurship is a not-for-profit, independent and neutral organisation

that advances social entrepreneurship and fosters social entrepreneurs globally.

As Schwab awardees, Chambers was selected as 1 of 40 social entrepreneurs to attend the World Economic Forum in Davos during January 2018. She said: "It is particularly important that the voice of social entrepreneurs, is heard by industry and government leaders. Social entrepreneurs who are running projects that are really working and creating meaningful change to people's lives can bring new perspectives to global leaders. If successful social projects can be scaled they could bring about systems change, which can significantly

transform the lives of millions of people living in devastating poverty," she said.

"We began The Clothing Bank as a small programme in Cape Town in 2010 and have managed to scale it to five branches around the country and spin off other entrepreneurship projects. Along the way we have learnt so much about working with people who are suffering the debilitating effects of poor education and poverty, and the best ways to build someone's confidence and belief in themselves to change their own lives. I am looking forward to passing on some of what we have learnt so others can use the

information to benefit more people."

The theme of this year's WEF conference is Creating a Shared Future in a Fractured World, aiming to deal with the divisive narrative in the global context. At Davos, Chambers will have the opportunity to meet, network and share The Clothing Bank's success with captains of industry, CEO's, senior government ministers, academics, celebrities and heads of foundations. "I am excited about being in such an illustrious company," said Chambers. "My hope is that The Clothing Bank's development philosophy and tried-and-tested methodology will gain traction globally."

# Robben Island Museum goes solar

WORLD Heritage site, Robben Island Museum has launched its brand new Solar PV mini-grid, which will provide the island with a total of

666.4 kW of electricity daily. This project has been made possible through a partnership between the National Department of Tourism (NDT) and Rob-

ben Island Museum (RIM).

The NDT recognises that tourism is a major contributor to the national GDP and therefore needs to be

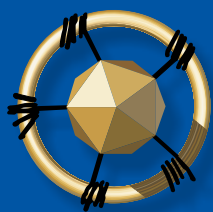
supported by renewable energy. "This collaborative initiative not only affirms our country's capability to engineer sustainable energy solutions, but it

inspires hope that the business of tourism can be conducted in a sustainable manner," said Tourism Minister Tokozile Xasa.

"Prior to the construction of the solar

plant, we relied solely on expensive diesel generators to provide electricity on the Island. This transition will see the island largely powered by the solar plant. This will

not only reduce the Island's carbon emissions by almost 820 tons per year, it will also bring about a savings of around R 4 million per annum," said RIM CEO, Mr Mava Dada.



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The various industry sectors are covered by five chambers within the merSETA: Metal and Engineering, Auto Manufacturing, Motor Retail and Components Manufacturing, New Tyre Manufacturing and Plastics Manufacturing.



*Pictured above, from left to right: Sola Future CEO Dr. Dominic Wills, Tourism Minister Tokozile Xasa, Robben Island Museum CEO Mava Dada, Deputy Minister of Tourism Elizabeth Thabethe, Robben Island Museum Council Member Laura Robinson, and Director-General of Tourism Victor Tharage.*



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**LEADERS IN CLOSING THE SKILLS GAP**



## Plastic ahoy!

# Why manufacturers need to take ownership of the plastic problem

A recent study by Plymouth University reported that plastic was found in a third of UK-caught fish, while a second report, by scientists at Ghent University in Belgium, calculated that people who eat seafood ingest up to 11 000 tiny pieces of plastic every year. Here, Miguel Campos, export sales manager at packaging manufacturer, Advanta, explains why manufacturers, particularly in the food sector, must take control of getting the plastic epidemic under control by stopping it at the source.

The damage that plastic is doing to our environment is receiving widespread coverage, notably in recent episodes of David Attenborough's BBC documentary, The Blue Planet II, showing the harm – and distress – plastic is causing marine life.

The increased coverage appears to be affecting the public's opinion and, as a result, their shopping habits. For example, a Populus poll in 2017 concluded that four out of five people were concerned about the amount of plastic packaging thrown away in the UK. However, in order to actually make a difference to the state of our oceans and marine life, food manufacturers must

take a stand and move away from using plastic packaging altogether.

### Radical approach

Andy Clarke, former CEO of ASDA, one of Britain's biggest supermarket chains recently said, "...regardless of how much is invested in Britain's recycling infrastructure, virtually all plastic packaging will reach landfill or the bottom of the ocean sooner or later. Once there, it will remain on the earth for centuries."

The only way to stop this is to take plastic off the shelves in the first place.

While many supermarkets are investing billions into increasing the amount of recycled plastic they use, it often leads to unusable or inconvenient options that result in the supermarket often reverting back to the original packaging choice.

Clarke and many campaigners, like those behind A Plastic Planet, are campaigning for supermarkets to create plastic-free aisles to cater for customer demand. There are also some independent stores breaking through where customers bring in their own containers to refill with products like shampoo, pasta or even cheese. However, the awareness and shift towards

reducing plastic use is not just a UK issue.

### Worldwide shift

In September, Sri Lanka announced a ban on single use plastic and Kenya implemented what is said to be the world's toughest plastic bag ban earlier in the year. The Environment Management Agency in Zimbabwe has also ordered the food industry to stop using containers made from expanded polystyrene (EPS) immediately.

Additionally, a recent UN resolution, backed by more than 200 countries, provides a framework for a collective action to prevent and reduce marine pollution. This particularly refers to pollution from land-based activities, as well as urging a global response into taking account for the full life cycle of products and packaging. However, many experts note that without binding commitments, consumers and particularly manufacturers must take steps to begin tackling the problem.

### Alternative options

As a result, some manufacturers are looking to alternative materials for packaging. From plant-based bio-plastics to glass or aluminium, there are



plenty of substitutes available with various benefits.

Materials like glass and aluminium are indefinitely recyclable. In fact, recycling aluminium takes 95 per

cent less energy than producing it from its raw materials. Aluminium also offers storage and cooking benefits in comparison to plastic, including being heat resistant to

over 400 degrees and not being affected by extreme freezing.

Foil trays, like those manufactured by Advanta, which are used across the ready-to-cook meal, meat and poultry and takeaway food sectors can also be gas flushed or vacuum packed, dramatically extending the product shelf life in comparison to plastic.

"We want a future for our grandchildren which is as far as possible, plastic free," Clarke continued. "Despite more than a decade of concerted

supermarket action on this issue, globally we are still dumping in excess of eight million tons of plastic in the ocean each year."

It is hoped that with shows like The Blue Planet II shining a light on the issue, consumers will begin to demand more from their food manufacturers to change the way they package their food. However, it's not consumers who should take ownership of this. Ownership of taking plastic out of the equation sits firmly with manufacturers.

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The IWA Water Loss Specialist Group, together with City Of Cape Town, will host the biennial Water Loss Conference and Exhibit from 7 to 9 May 2018 at the Century City Conference Centre and Hotel in Cape Town, South Africa.

The Water Loss Conference and Exhibition 2018 will be one of the world's largest water loss conferences and is expected to attract over 500 participants from more than 50 countries.

Many of the world's leading experts in the field of Non Revenue Water Management will be present and will discuss the latest developments, strategies, techniques and applications of international best practices as well as successful case studies. In addition a 1-day pre-conference

workshop will be held on 6 May 2018 to provide an introduction to the issue of Non Revenue Water Management and an overview of the latest IWA Methodology for reducing water losses from Municipal water supply systems.

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## Water Loss Conference & Exhibition

THE IWA Water Loss Specialist Group, in association with City Of Cape Town, will host the biennial Water Loss Conference and Exhibition from 7 to 9 May 2018 at the Century City Conference Centre and Hotel in Cape Town, South Africa. The Conference will be one of the world's largest water loss events of its type in the world and is expected to attract 400 delegates from more than 40 countries. Of 200 abstracts submitted, 100 have been selected for oral presentation at the Conference.

Issues to be discussed will include:

- Cities that have experienced the "day zero" scenario and lessons learned
- Pressure manage-

ment and reducing leakage and demand through advanced pressure control

- Reducing water losses in schools
- Identifying leaks through latest technology
- Identifying leakage and wastage in business and communities
- Water loss reduction interventions – case studies
- Use of technology in battle against water losses
- Community awareness. Education and public involvement in saving water

Many of the world's leading experts in the field of Non-Revenue Water Management will be present to dis-

cuss the latest developments, strategies, techniques and applications of international best practices as well as successful case studies. In addition they will present a 1-day pre-conference workshop on 6 May 2018 to provide an introduction to the issue of Non-Revenue Water Management and an overview of the latest IWA Methodology for reducing water losses from Municipal water supply systems. This one day, back to basics, workshop is an event not to be missed as it will provide a solid grounding on water loss management and will be hosted by one local and three international professional who between them have more than 100 years of practical hands-on experience.



## New Qdos 20 optimises metering for sodium hypochlorite applications

THE new Qdos 20 pump – an extension to the popular Qdos range – has been launched by Watson-Marlow Fluid Technology Group.

The new pump has been developed to offer highly accurate sodium hypochlorite metering in disinfection applications with flow rates to 20l/h at a maximum of 7 bar pressure. It is especially suitable for applications at the well sites of many smaller water treatment plants, where operators are often injecting into water lines at higher pressure.

Qdos 20 features the same user-friendly interface and control options, ensuring that users have continuity with any existing Qdos applications. Offering low total cost of ownership, the new model is designed as a drop-in replacement for diaphragm pumps. Qdos pumps also include the ReNu pumphead for single, no-tools maintenance.

Its intuitive interface

provides simple control of the pump via manual, 4-20mA, contact or PROFIBUS control. The brushless DC motor control maintains flow accuracy of  $\pm 1\%$  with a repeatability of  $\pm 0.5\%$  and a turndown ratio of 3330:1.

The pump is ideally suited for tight control for chlorine residual. Successful field trials and SCADA data indicate a considerable improvement in variation of chlorine residual compared to even the highest specification diaphragm metering pumps. This is achieved via the twin offset rotor design.

The Qdos 20 peristaltic pump technology uses two tube channels; where the channels are operated out of phase. Although peristaltic pumps are generally lower in pulsation than other positive displacement pumps, Qdos 20 reduces this pulsation even further by alternate tube compressions ensuring pulsation is bal-



anced out. This results in almost continual positive fluid displacement, and consistent metering of chemical into the application.

Process uptime is maximised by facilitating quick, safe and easy pumphead removal and replacement, with no need for tools, no specialist training and no maintenance technicians needed on site. The contained pumphead design with integral leak detection reduces

wastage and eliminates operator exposure to chemicals.

Field trials have confirmed the long life of the pumphead, with one utilities customer in Minneapolis experiencing 12 months pumphead life. When operating up to 7 bar, the Qdos 20 pump also significantly reduced maintenance downtime. As a result, the plant is currently in the process of replacing the trial model with a production unit.

## How long does it take to change the sleeve?

THE standard practice for replacing a sleeve in any pinch valve is to remove the valve from the line which requires the use of a crane for all but the smallest valves. The valve is then stripped – the sleeve replaced – and the valve rebuilt. It is then reinstalled in the line – a process that can take several hours at best requiring the attention of several fitters and millwrights.

With the patented Red Roc Hi-Lift feature the valve remains in the line and the sleeve can be replaced in a much shorter time with only two fitters.

On 15 September 2017 at a nickel mine in Mpumalanga, a Red Roc valve sleeve was changed in 80 minutes and reduced the plant downtime by at least ten hours.

“The process is simple and only involves removing the bolts holding the top half of the body in the line and slackening the ones in the bot-



tom half. Jacking bolts on the valve flanges spread the valve flanges from the pipe flanges loosening the sleeve, so that it can be removed in line. The quick release clamps holding the two halves together are removed. The top half is then raised using the two hydraulic cylinders mounted on the bridge and operated by a hand pump. In the raised position the old sleeve can be lifted out and the new one fitted in position. The process is then reversed with the

body being allowed to drop by releasing the oil in the cylinders back to the reservoir – the clamps are refitted and line bolting replaced” said Gregor Hopton, Afrivalve’s Group Marketing Manager.

The Red Roc Hi-Lift pinch valves are manufactured by Afrivalve, a division of eDART Slurry Valves at eDART Slurry Valve’s facilities in Jet Park, Gauteng. The range includes sizes from DN150-DN600. Larger sizes are available upon request.



### The cycle of solutions – water technology by KSB

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## ARVALV through-port knife-gate valves for abrasive, scaling applications

ARVALV through-port knife-gate valves have long been the product of choice for challenging abrasive and scaling applications at plants and facilities where extended service life is a must.

The ARVALV range is manufactured, stocked, and serviced by AR Controls, an importer and manufacturer of a comprehensive range of internationally-recognised valves and instrumentation. The company also boasts the largest product inventory of any similar company in Africa.

A particular design feature of the ARVALV range is that, unlike traditional push-through knife-gate valves, the partially-energised seats remain in their natural state when the gate is retracted. This is due to the unique through-port gate, which makes permanent contact with the seats, even when fully open.

Slurry knife-gate valves utilising fully-energised sleeves that need to expand sufficiently to form a seal with the gate retracted are prone to premature wear due



to entrapped solids, which damage the seat the next time the gate is closed,” AR Controls Mechanical Engineer **Sune Huyser** explains. This problem is eliminated by featuring a through-port gate, which not only results in an extended service life, but increases plant availability as well.

The ARVALV range has been tried, tested, and proven to deliver superior performance in the following: dewatering slurries (such as ferrosilicon), cyclone suction/feed applications, dense media separation, concentrate transfer, booster and TSF tailings, pump isolation applications, wet and dry hopper applications, pulp and paper feedstock, and pulp and paper liquor applications.



# PMPS pumps into mining

PACKAGED Metering & Pumping Solutions (PMPS) is to introduce its Rotho peristaltic hose pump from Italian manufacturer, Ragazzini, to the local mining sector. Having previously been available to the wine industry only, the versatile, positive displacement transfer machine, can be deployed for pumping a variety of substances across an array of industries, but it is in mining where PMPS believes the innovative pump will offer a greater value proposition with its ability to move viscous/abrasive fluids.

Peristaltic pumps are more rugged than diaphragm pumps and are more common in the local mining industry. Peristaltic pumps don't use any kind of valves or check balls, so they are well-suited for slurries and chemicals that have particulates, while a diaphragm pump is ideal for clean fluids only.

"A key competitive edge of the new Rotho peristaltic hose pump is that it allows for pumping of both rugged and clean fluids, while available competitive



solutions only do either of the two," says David O'Neill, Technical Director at PMPS, adding that the Rotho is the only pump that has the ability to move viscous and high solid content liquids without blocking.

## Unique features

Several features of this pump are claimed to be unique and have made it a pump of choice across a number of applications in several industries such as paint, foods, beverages, water and wastewater treatment.

The fluid being transferred is confined within a reinforced internal hose located within the pump housing. The pumping ac-

tion occurs when the pump roller glides over and compresses the internal hose, creating pressure which forces fluid out. Once the roller passes, the internal hose returns to the uncompressed state, creating a vacuum which draws fluid in.

The alternation between compression and expansion of the internal hose creates constant rate of displacement. The hose in the only part under wear and its interior part is the only component that contacts the fluid. In the metering of corrosive reagents or for use in processes involving sulphur and cyanide, for example, this minimises downtime related to maintenance, especially in 24/7 con-

tinuous processes.

In mining, the Rotho peristaltic pump is usually deployed to transfer abrasive and very acidic sludge and slurries. The pump can become the hub of the production process, the core of the plant involving the movement of viscous or abrasive fluids, often with high solid contents that only the Rotho peristaltic pump can transfer without clogging tubes or blockages to clear. This results in maximised and smooth processing.

"When pumping these highly aggressive high-temperature components with suspended solid contents, the Rotho peristaltic pump offers unrivalled performance, as it has no valves, seals or glands that can clog or become obstructed," says O'Neill.

Furthermore, its superior suction capability of pulling vacuum lifts from 9.8m, plugs transfer problems often encountered when employing other types of pumps. Additionally, the Rotho can actually run dry, without the tube burning or deteriorating in any way.

# PG20 range of cast iron gear pumps for enhanced valve steering



*The latest Salami Group 2 (PG20) cast iron gear pumps are compact, dust-resistant and explosion-proof making them ideal for mining, agriculture and forestry applications.*

HYDRAULIC and Automation Warehouse (HAW), part of the Hytec Group of Companies, recently introduced the latest Salami Group 2 (PG20) range of cast iron gear pumps to the South African market. They follow on the success of the Group 3 (PG331) cast iron gear pumps and are highly suited for mining, agriculture and forestry applications, have dust resistance and explosion-proof componentry and are more compact than their predecessor.

Housed by a front mounting flange and rear cover, pumps in this range boast a one-piece drive shaft construction and feature double shaft seals on pumps with reinforced inner shaft seals for motors. The Salami PG20 gear pumps from HAW are available with displacements from 16cm<sup>3</sup>/r to 26cm<sup>3</sup>/r and come with the option of shafts, flanges and ports as per European and American standards. All in the range have two flange mounting styles, five shaft types and the porting is the standard BSP/SAE threaded / Bosch square and diamond porting.

In addition to extended product longevity gained from

its cast iron composition, their high carbon content and low static discharge capabilities secure its explosion-proof status. Its small dimensions are gained by installing the gear set, gear support bushings and suction and delivery ports within the main body and the range is designed to accommodate any engineering design. Additionally, the design satisfies a variety of OEM manufacturing designs, including those in mining and forestry applications too.

Pumps in this range have a maximum starting viscosity of 800mm<sup>2</sup>/s, minimum operating fluid viscosity of 12mm<sup>2</sup>/s and suggested fluid viscosity range of 17 – 65mm<sup>2</sup>/s. Double shaft seals are used, with nitrile seals as standard and Viton seals for high temperature applications. The

fluid operating temperature range varies from -25 to 85°C and -250 to 110°C with Viton (FPM) seals.

HAW will distribute Salami's new PG20 series cast iron gear pumps in South Africa and across sub-Saharan Africa. The company retains a comprehensive stockholding at its Spartan offices in Johannesburg and conducts assessments and repairs through the Hytec Group. All wear parts, including seals and drive shafts, are held in stock.

All pumps are hydraulically tested after assembly to ensure the high standard performance required by Salami's engineering. HAW is the official authorised sub-Saharan Africa distributor for Salami-manufactured gear pumps, motors and mobile control valves.

# Carbon fibre column internals

SULZER Chemtech, market leader for separation and mixing technology, and SGL Group, a worldwide leading manufacturer of carbon made products, are expanding their cooperation in the field of column internals based on SGL's carbon fibre composite materials (CFC) going by the brand name SIGRABOND.

Carbon and graphite products are used whenever other materials such as steel, aluminium, copper or plastic fail due to their limited material properties like for example temperature and corrosion resistance. In addition to the CFC structured packing that has already been marketed successfully under the Sulzer brand name MellaCarbonTM, the existing CFC column internals portfolio – mainly support systems – is now completed with liquid distributors, collectors and feed pipes made of SIGRABOND®.

"The new column internals, introduced under the brand name MellaCarbonTM, are as corrosion-resistant as graphite liquid distributors used to date, but are at the same time lighter, stronger, stiffer, more rigid and more temperature resistant than plastics and have lower cost than special metals.

An innovative connection system enables the realization of larger diameters and allows cost efficient production," explains Ralph Spuller, SGL project

manager for the cooperation project.

In recent months, more than 30 new CFC liquid distributors have been designed, manufactured and success-

fully commissioned for industrial applications – often with the associated MellaCarbonTM packings, support grids and feed tubes.



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# No more awful shower experiences

IMAGINE standing under the shower in a hotel in the morning... What usually happens when other hotel guests all start to shower at the same time? The water temperature suddenly changes from pleasant to horribly cold or unbearably hot! Sometimes there is less water flowing sometimes there is more; the day has hardly begun but it starts with a basically avoidable annoyance. It would be avoidable, if the planners had thought beforehand to install Kobold's REG flow restrictors/regulator that keeps constant quantities of liquids in pipework systems.

The REG rate regulators are ideally suited for the simple restriction to a preset value of throughputs of water, or of liquids similar to water. The flow restrictors ensure equilibri-



um, particularly in systems with many users and resulting pressure fluctuations caused by random flow conditions. In other words, the desired throughput is not exceeded.

The REG valve operates without power supply, keeping the flow rate of fluids constant with great accuracy ( $\pm 0.2l/min$ ) regardless of fluctuating inlet pressure. The principle is impressive,

yet uniquely simple. The constant flow is generated by two stainless steel spring plates of the regulating orifice, riveted together across each other, and which, depending on the differential pressure, open or close to a greater or lesser extent the ring or regulating funnel thus created.

For the most extreme differential pressure (around 10 bar) the flexible regulating

orifice is in complete contact with the regulating funnel so that only the rivet hole cross section is available for flow and from this point the valve operates as a fixed orifice. The REG flow limiter can be used wherever a constant flow rate is required despite pressure fluctuations in the system, for example switching a consumer unit on and off.

#### Notable Benefits

- No auxiliary power required
- Easy to assemble
- Compact design
- Reliable - no wearing parts
- Energy-saving
- Easy to fit

Kobold's REG valves are available in brass and stainless-steel.

# IPR expands into industrial sector



*A cost effective desilting solution is available from Integrated Pump Rental.*

SIGNALLING its expansion into the economy's industrial segment, pump and dredging specialist, Integrated Pump Rental recently made short work of cleaning the sediment from the reservoirs of a customer in tile manufacturing.

According to Integrated Pump Rental managing director Lee Vine, the tile making process involves wastewater being fed into storage tanks and then through a filter press.

"During this process, an aeration system keeps the slurry in suspension and ensures the correct consistency for pumping," says Vine. "With the aeration system under-performing, the slurry tended to settle in the reservoirs, reducing the water storage capacity

and undermining the efficient running of the plant."

The sediment also creates a potential environmental hazard should the tanks overflow, but its density makes it difficult to pump out.

This challenge in the water storage tanks – which measure about eight metres square and hold some 200m<sup>3</sup> of waste water each – then has a knock-on effect down the line, causing inefficiencies in the downstream process. In this particular operation, it also became necessary to incur the additional cost of introducing municipal water to the system.

"Our team was quickly able to assess the situation, and proposed the use of our innovative hydro solution,

which has proven so successful and cost effective in desilting water reservoirs at mines or wastewater treatment plants," he says. "The solution proved to be very successful and cleared the tanks of the sediment that had built up, allowing the customer to get their process back on track."

With its high quality Grindex slurry pumps and purpose engineered hydro mining monitor guns, Integrated Pump Rental's hydro cleaning units are capable of extracting high tonnages of sediment from reservoirs.

Vine emphasises that applying a regular cleaning programme need not be onerous for end-users, and will ensure that their tanks are sediment-free in a range of applications.

## New SlurrySucker model passes trial with flying colours

THE new, high solids capacity SlurrySucker dredging unit from Integrated Pump Rental recently proved its mettle at a Limpopo municipality's wastewater treatment plant.

"We were requested to clean two wastewater settlement ponds which had silted up and were no longer performing their function of settling the sewage before it left the property," says Lee Vine, managing director at Integrated Pump Rental. "Each dam measured about 100 metres by 100 metres and was about three metres deep; we estimated that they were about 70% filled with sediment."

The company's new SlurrySucker Mark II, with a vortex-type impeller in the slurry pump and a redesigned dredge head achieves up to about 50% solids

concentration by volume. Vine says this significant especially when compared to the 30-40% concentration with the standard dredge head. The larger holes and the vortex-type impeller allow for larger solid objects like boots, gloves and hessian bags to pass through without blocking the system.

"After being awarded the contract, we quickly moved our equipment onto site; the total weight of the SlurrySucker is only about two tons – perhaps four tons with accessories – so it is relatively lightweight and easy to move around by road trailer," says Vine. "We spent a day setting up the unit, then spent 25 days cleaning each dam, working an eight hour shift each day."

Operated by just one person, the six metre long and three metre

high unit agitates the sediment in single metre wide paths as it moves up and down the pond.

"After about two months on the job, we were pleased to have completed our mandate successfully without a single blockage," he adds. "It took just one day at the end of the process to decommission the equipment and move off site."

Vine emphasises that the design of the SlurrySucker allows it to be used on plastic-lined dams without risking any damage to liners, as it uses water to agitate the solids, and does not have cutters that could damage the pond liner.

"This is particularly important from an environmental perspective, as wastewater could leak out if the liner was cut or damaged, and could contaminate groundwater," Vine says.

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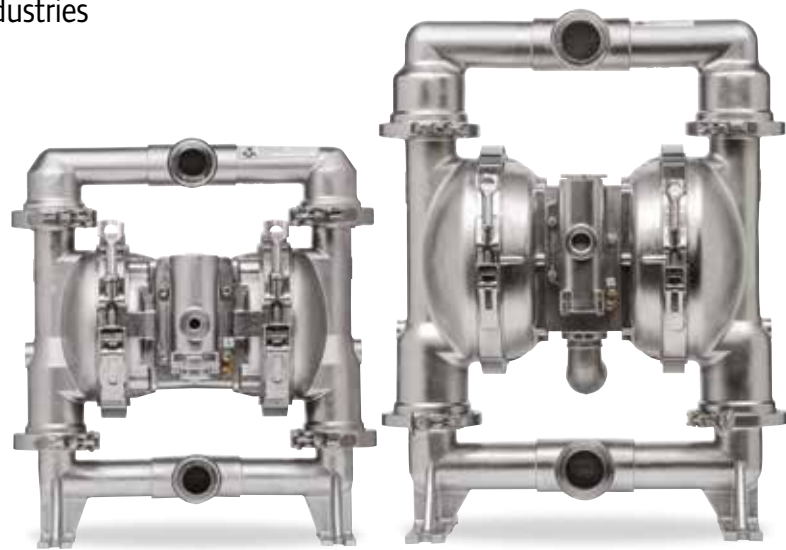
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# Hy-Optima hydrogen analysers: optimised for refinery operations

THE basic process of refining crude oil – fractional distillation – into useable product is reasonably simple. Crude oil contains various hydrocarbon compounds all of which condense at varying temperatures. The crude oil is heated in a column and the condensates are drawn off at different levels to produce – amongst others – raw petroleum, diesel and jet fuel products.

However, it is after these fuels in their basic or 'raw' form have been produced, that the complexity and challenge arises. Each of these fuels or fractions has to be further refined before it becomes saleable petrochemical product. These subsequent processes are dependent on having specific levels of hydrogen in the process stream, the levels of which need to be accurately monitored.

"In an oil refinery, they are up to 23 points where the level of hydrogen needs to be very accurately monitored," explains Ian Fraser, MD of RTS Africa Engineering, a Tshwane-based company specialising in innovative technologies which provide solutions to industrial challenges. Among other things, the company has been involved in supplying



hydrogen production and analysis equipment for many years.

"Process engineers need to know the exact percentages of hydrogen at these points, in order to monitor the exact performance of the process and to also continuously optimise these processes," Fraser adds.

To carry out this monitoring, many oil refinery process engineers use the Hy-Optima 2700 gas analyser from RTS Africa's US principal H2Scan.

"In the sensor of this device, a thin-film palladium/ nickel-based lattice desorbs hydrogen as it encounters the sensor. As hydrogen is absorbed into the metal lattice, the bulk resistivity of the lattice changes, allowing for accurate measurement of hydrogen levels in particular process streams.

The Hy-Optima's solid-state, non-consumable sensor provides real-time continuous hydrogen concentration data. "This sensor is not af-

ected by the presence other gases such as carbon monoxide, methane and hydrogen sulphide," explains Fraser.

The sensors are protected against corrosive gases by H2Scan's proprietary coating, which gives the Hy-Optima 2700 an operational lifetime of at least 10 years.

A further advantage of the Hy-Optima 2700 is that the instrument is housed in an explosion-proof casing, which meets stringent international 'Zone 2' safety standards. This instrument will report through electronic connections to an existing SCADA-type control system.

"Traditional monitoring methods rely on sampling and the use of gas chromatographs, thermal conductivity meters and density analysers. These monitoring methods are both costly to install and maintain. The time from sample extraction to results can be quite long, which robs process engineers of the opportunity to

monitor in real-time," Fraser remarks.

He points out that accurate hydrogen monitoring by the Hy-Optima 2700 will however ensure that refineries not only produce consistent high-quality products, but also protect their complex and costly plant against damage.

"For example, very expensive catalysts are used to break down the long chain molecules in the heavier fractions. If the levels of hydrogen in the process stream are too high, there is too much energy present, which can damage catalysts. If there is insufficient hydrogen, the process slows down, potentially costing the refinery a significant amount in downtime. In addition, accurate hydrogen monitoring can also significantly extend catalyst life resulting in substantial operational savings," he says.

The Hy-Optima 2700 can be used to monitor a number of other post-fractional distillation refinery processes such as reforming, cracking, recycle, tail gas, fuel gas, flare gas and other multi-component process streams. The Hy-Optima range of instruments can also be used in other sectors, such as in the supply of natural and industrial gas.

There is, in addition, extensive application in the petrochemical industry to monitor polymer feeds and flare gas process streams, or in the manufacturing sector, in metals annealing, semiconductor, oil hydrogenation and fertiliser manufacturing process streams.

With real-time hydrogen monitoring, process engineers have an overview of exactly what is taking place in any complex refinery process stream. This means early detection of any problems and, ultimately, the refinery is able to produce better products more economically. Improved energy efficiencies result in reduced maintenance and downtime costs.

"Oil refining is a high stakes business. If a refinery finds it is experiencing challenges either with low production or poor product quality, it needs to look at the accurate control of hydrogen in the various process streams," continues Fraser.

"Here the Hy-Optima 2700 hydrogen analyser offers an unmatched, real-time overview of hydrogen levels in process streams – allowing process engineers to enjoy continuous, accurate control of their refinery's performance," he concludes.

## Cummins to build state-of-the-art premises at Waterfall Logistics Precinct

CUMMINS Southern Africa is to relocate its Southern Africa Distribution Business to Waterfall Logistics Precinct – Gauteng's new innovative work, live and play destination in Waterfall. The new premises will form part of the Waterfall connected hub which offers a fully integrated lifestyle that embraces the ultimate work-life balance.

"Today we celebrate the start of the journey towards our new offices as we break ground for construction to commence. Our relocation to Waterfall Logistics Precinct is of critical importance to our business as it positions us at the epicentre of Gauteng's most dynamic and strategically located business hub. The Waterfall Logistics Precinct environment aligns with the importance Cummins places on work-life balance that we encourage for our employees," said Thierry Pimi, MD of Cummins Southern Africa.

The new premises, developed in line with Waterfall's sustainability approach and principles, will include the Cummins Southern Africa Regional Operations, the Master Rebuild Centre, the current Cummins



**Mr Thierry Pimi,**  
Managing Director of  
Cummins Southern  
Africa.

Longmeadow Branch and the Technical Training Centre; and will boast spacious premises of approximately 15 355 m<sup>2</sup>. The long-awaited state-of-the-art building is due for completion in October 2018 and the various operations will occupy the building in stages until full occupancy is achieved in early 2019.

**"...due for completion in October 2018..."**

Office space will be designed to accommodate different preferred work styles of employees, aligned to the Cummins Smart Office Standards, whilst ensuring individuals and teams enjoy access to space and tools to ensure maximum productivity. The workshop and warehouse facilities' layouts will accommodate the flexibility required to adjust to market trends and future growth. The equipment in the workshop will be best in class to ensure professional deliverables.

Waterfall Logistics Precinct's central location in relation to Pretoria, Johannesburg and Sandton, as well as its proximity to major highways, transport nodes, and the Gautrain Station, makes it an ideal location for businesses looking for safe working premises and an appealing working environment.

Cummins Southern Africa is headquartered in Johannesburg, with wholly owned branches in South Africa, Botswana, Zambia, Mozambique and Zimbabwe. The company also enjoys a wide range of dealer networks in support of its widespread Southern Africa footprint.

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## Multi-well pad solution for oil and gas producers boosts data, cuts cost

DRILLING advancements, including horizontal drilling techniques, have transformed oil and gas operations from simplistic single-well pad fields to more complex multi-well pads. In turn, operators and equipment builders can modify their control systems approach to optimise these changing applications. The Well Manager solution from Rockwell Automation provides oil and gas companies a single solution for all control functionality throughout a well pad, resulting in easier implementation, real-time data visibility, production

efficiency and reduced costs.

Traditionally, oil and gas companies built multi-well pads using different controls and locations throughout a single pad. The Rockwell Automation solution leverages just one controller for all well pad operations – including rod pumps and plunger lifts, electrical submersible pumps, progressing cavity pumps, natural flowing wells and more. Shifting all operations to one controller from a single vendor reduces maintenance costs, helps with revision control, and streamlines training and support.

“Today’s modern, multi-well pads resemble small production facilities,” said Michelle Junius, Marketing Communications Specialist, Sub-Saharan Africa, Rockwell Automation. “As such, traditional approaches for well monitoring and control using RTU technologies have become cost prohibitive and require a high level of integration effort. This makes our Well Manager solution an ideal fit for multi-well pad applications. Modular and scalable, this solution helps ease integration with existing systems and other Rockwell Automation

applications, including energy management and intelligent power integration. It also helps lower costs and cut installation time for improved lifecycle management.”

The Well Manager solution is delivered pre-engineered to speed integration of a multi-well pad. It is scalable and can support up to 32 wells in one location with flow management, artificial lift control, and site-wide data visibility. Because data is pulled directly from the control system, it has higher integrity than operations that leverage manual data reporting. The solution is



built with expansion in mind – ready to support wells and equipment that might be added to a site years after initial implementation.

The solution also enables self-declaring

wells to be automatically discovered and integrated into the production environment. This auto-discovery feature removes human interaction, reducing risk of error and depen-

dencies on special skill sets. It also speeds the time it takes to bring a new well online to mere minutes, allowing producers to get valuable production data out of the well more quickly.

## Foam-based fire suppression for fuel storage facilities

### Fighting fire with foam concentrates

FUEL storage fire protection is critical and even more so when it is done underground. Detection systems for early response to a fire outbreak are essential. In this article, fires safety specialist, Mike Feldon, discusses the use of firefighting foam as a means of fire suppression and extinction.

There are basically two types of fire that utilise firefighting chemicals to enhance or to make firefighting with water more effective:

‘A’ class fires which are solid fuel based

‘B’ class fires which are liquid fuel based

In A class fires you use chemicals called wetting agents or A class foam concentrates which increase the boiling point of the water and breaks the surface tension of the water which allows it to penetrate the material, making the firefighting far more effective. This allows the water to penetrate deeply into the internal pile of solids and the higher boiling point allows the water to sustain its firefighting capabilities for much longer. These A class chemicals are added to the water at 0.1% and 1% for wetting agents and 2- 5% for foam.

In B class fires there are two types of concentrates namely: Hydro carbon liquids (non-polar solvent) and alcohol based (polar solvents) liquids.

To effectively manage a hydro carbon based liquid fire an Aqueous Film-Forming Foam (AFFF) concentrate is used to enhance the water capability and provide foam to fight the fire.

Alcohol based liquid fires on the other hand are more complexed, and another layer of chemistry is added to the firefighting chemicals in order to provide the correct weapon to attach these fires and are called Aqueous Film-Forming Foam with Alcohol Resistant polymer added or AFFF-AR. These complexed chemicals are Thixotropic and Pseudo plastic

There are two genres of chemical foam available to the market:

- Protein Based Foams
- Synthetic Based Foams

The trend worldwide is to move towards synthetic foams which is newer modern tech-

nology with improved stability and life span, in addition, included in this new trend is a move towards fluorine free foams which offer an environmentally friendly solution for some types of B class liquid fire applications.

When selecting a foam chemical the amount to be added to the water or dosage percentage is a critical selection factor. When selecting the dosing rates, there tends to be confusion based on the difference between 6% foam concentrate, 3% foam concentrate and 1% foam concentrate and the related costs. 1% foam concentrate is taken as being more diluted and therefore less effective than a 3% or 6% foam, however, in fact the reality is exactly the opposite. The 1% is a more concentrated formula and therefore is required in far less quantity to provide the same effect.

When 1% foam is added to 99% of water it equals 100% and 3% foam is added 97% water it equals 100%, and 6% foam added to 94% water equals 100%.

The end result is that each compound blended with its relevant amount of water equals 100% - meaning

that there is absolutely no difference between a 1% foam concentrate, a 3% foam concentrate and a 6% foam concentrate once you have produced the premix solution. Taking this a step further in most cases when using 1% AFFF the end result to the project costing will be a more cost effective solution to your project.

At this point, all that is happening is blending the water and the firefighting chemicals together; it is at the end of the line on presentation of this premix to the fire that the foam is formed. This is achieved by aspirating air into the water/chemical mix via a form of venturi at the nozzle which sucks the air into the mixture and an expansion rate is achieved. This expansion rate is dependent on the type of end of line equipment and on whether low, medium or high expansion ratios are required. The expansion ratio required will depend on the risk been protected for example, on tank farm bunds medium expansion equipment is installed, for air craft hangers high expansion equipment is common so that a vast area can be very

quickly filled to extinguish the fire.

ChemSystems have been manufacturing Fire Fighting foams in South Africa since the early seventies and have been manufacturing Dr Sthamer foams under license from Dr Sthamer in South Africa since the

late seventies.

DoseTech (Pty) Ltd introduced the German manufactured FireDos foam dosing system into the local market in 2000, now 18 years later they have successfully supplied a large number of foam dosing systems into a vast cross section of in-

dustries with a wide variety of dosing for most foam concentrates and dosing rates. Recently, FireDos GmbH introduced monitors [water cannons] to their range which increased the fire protection capabilities offered including mobile foam dosing and monitor systems.

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# Turning: Colchester Multiturn CNC Lathe

THE new MultiTurn is a simple, flat-bed CNC lathe incorporating the powerful and user-friendly Siemens 828D control with Shopturn as a standard feature, although Fanuc 0iTF with Manual Guide i can also be fitted should the customer specify it.

The MultiTurn takes a highly established, robustly engineered lathe concept from Colchester that makes it the perfect machine for many of today's CNC turning applications.

The MultiTurn, available from F&H Machine Tools in Johannesburg, is everything that you come to expect from a Colchester lathe – robust, stable and highly precise, irrespective of

the component size handled. The Siemens 828D control with Shopturn has a well-earned reputation for being highly user-friendly and intuitive, ensuring that operators can cut quickly and easily with very little training.

However, the Shopturn system is also powerful enough for more advanced CNC users to output maximum productivity quickly.

The Colchester MultiTurn lathe has been designed specifically for CNC users looking for increased versatility on one-off and small batch production, first time CNC buyers and jobbing shops looking for real programming simplicity and education and training es-

tablishments needing a real lathe with step-by-step simplicity.

600 UK offer six Colchester MultiTurn models, starting with the compact MultiTurn 1000, which has a 330mm swing over bed, a 7.5kW motor, outputting spindle speeds of 3 500 r/min, right through to the heavy-weight MultiTurn 6000, which has a massive 760mm swing over bed and an 18.5kW motor giving spindle speeds of up to 1 400 r/min.

The MultiTurn 6000 also has bed length options ranging from 1.5 to 6 metres, ensuring that the MultiTurn is capable of turning any component, regardless of size, right through to long shafts, billets, bar stock and castings.

# OR Laser takes its metal AM offering to the next level

AT formnext 2017, OR Laser introduced its new hybrid metal additive and subtractive manufacturing platform, the ORLAS Creator Hybrid and unveiled its new cloud manufacturing services.

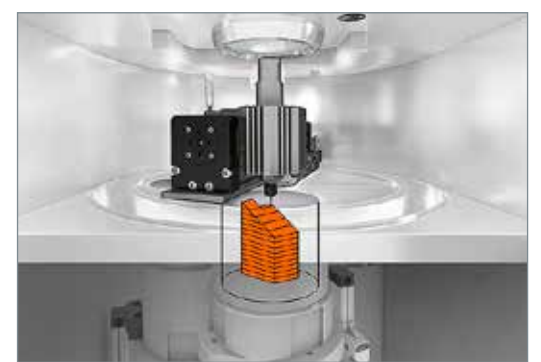
In 2016 OR Laser introduced the ORLAS Creator, an accessible direct metal AM system, and throughout 2017 started shipping the first platforms. At this year's formnext, OR Laser unveiled its latest metal AM development—the ORLAS Creator hybrid 3D printing and milling machine.

The ORLAS Creator hybrid brings together the benefits of both additive manufacturing and subtractive manufacturing within a single platform to offer a comprehensive manufacturing solution. Simply put, the advantages of 3D printing complex metal components using the direct AM powder melting process in combina-

tion with the OR Laser's advanced milling capabilities for precision finishing ensure that the ORLAS Creator hybrid is a compelling manufacturing solution at an accessible price point for SMEs.

Moreover, the ORLAS Creator hybrid goes beyond the capabilities of classical milling/machining, whereby structures and surfaces that are not normally reachable (such as inside contours, undercuts or hidden cooling channels) can be milled effectively. The ORLAS Creator Hybrid offers all of the outstanding 3D printing features of the classic Creator, including the full laser power of 250W at a spot of 40µm; laser processing speeds of 3 500 mm/s; and a build platform 110mm (diameter) with a maximum Z axis of 100mm.

Also from OR Laser was the launch of the company's new cloud manufacturing services. This intelligent and progressive service will add value for any ORLAS Creator user and their industrial operations. As Industry 4.0 gathers momentum and digital data becomes increasingly fundamental, AM users



need to be able to seamlessly join this revolution. This is precisely the impetus behind the development of OR Laser's cloud manufacturing capabilities, which offers users a continuous, connected interface with the machines and their data. With multiple functions, this cloud manufacturing service can monitor machines in real time as well as provide preventative maintenance reports that avoid downtime; provide monitoring and analysis of multiple systems from one location; and provide analytical insight for industrial applications based on the machines parameters and the materials being used.

OR Laser used formnext as the platform to launch another new hardware system—the ORLAS Cube—a flex-

ible and fully enclosed system that can fulfil the most challenging industrial tasks courtesy of its high-quality and extremely precise axis system combined with a stable and extremely durable granite processing table. The Cube system's flexibility stems from the fact that it can be utilized with all laser sources and processing heads from OR Laser, which means that it can be deployed as a welding system or as a compact cutting system for a multitude of possible applications, including powder cladding applications. The system is controlled by a modern 10.2 inch touch display, while machining strategies can be generated directly with the system using the built-in ORLAS SUITE CAM software.

## Machine performance analytics bring OEM expertise into the digital environment

THE Industrial Internet of Things (IIoT) has increased the availability of information throughout the enterprise by orchestrating data from multiple sources and applying machine-learning applications. But the power of new IIoT tools to improve machine performance is limited when those with access to information are not experts on the machine, leaving powerful machine information untapped.

To better connect industrial producers with expertise outside their production environment, Rockwell Automation offers the FactoryTalk Analytics for Machines cloud for OEMs. Cloud-enabled analytics provide machine data organised in intuitive dashboards that pull from machines deployed across the globe.

“By bringing the expertise of OEMs into a producer's ecosystem, smart machines perform better, and critical

process anomalies can be quickly resolved,” said Christo Buys, Business Manager – Control Systems, Sub-Saharan Africa, Rockwell Automation. “Cloud-based machine analytics give OEMs real-time and historical insights into how their equipment is operating from anywhere, so they can collaborate with customers to help reduce downtime.”

An IIoT-enabled packaging machine from Cama Group showcases the value of increased collaboration to both OEMs and end users. The machine offers independent cart technology for fast changeovers, while the FactoryTalk Analytics for Machines cloud relays critical KPI data to the cloud. Real-time performance insights are displayed to Cama Group service engineers in five, easy-to-navigate screens.

A primary display shows a global map indicating every machine at all customer sites the OEM has subscribed to

the service. In addition to the display is summary information on machine status and recent OEE performance. A simple search function then allows service engineers to filter by specific end users, locations or machine types for further analysis. At the machine level, OEMs can also view information about machine states, top events, production counts, cycle time attainment, and custom process variables and counters for the last three months on pre-configured dashboards and drill-down screens.

The system requires minimal setup from the OEM, and can be deployed and fully functional in a matter of minutes. A subscription-based model allows OEMs maximum flexibility and low, predictable costs.

The FactoryTalk Analytics for Machines cloud is part of a larger, expanding ecosystem of analytics offerings from Rockwell Automation.

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# Upat supplies “best professional power-tool brand in the world”

ESTABLISHED in 1924 in the US, Milwaukee is arguably the best power-tool brand in the world, according to Upat Product Specialist Werner Koch. “The cutting-edge in power-tool development at the moment is battery technology, and Milwaukee is a global leader in this regard, not only in lithium-ion batteries, but in power-management systems as well.”

Class-leading features of the Milwaukee brand are its POWER-STATE™ brushless motors, which work harder, last longer, and convert energy

into power far more efficiently. “These patented motors allow the power tools to outperform competitor products in terms of both run time and performance,” Koch notes. He adds that Milwaukee manufactures all of its motors itself, as opposed to the traditional method of sub-contracting it out, thereby allowing for full quality control.

The company also has an extensive research and development initiative, based on the approach of taking a specific customer problem or application, and building a power

tool around that requirement. “End users are also approached for feedback during this development process, which will incorporate any further changes or suggestions. The end result is supreme flexibility and adaptability, and an unrivalled focus on innovation,” Koch notes.

The Milwaukee brand is predicated on the slogan ‘nothing but heavy duty’, which makes it particularly suited for the African market. “These are the toughest power tools on the market today,” Koch asserts. They are ideal for Africa, which



how to handle their power tools and to get the maximum benefit from them.

While the Milwaukee brand has been designed specifically to accommodate generic, interchangeable consumables such as reciprocating and normal saw blades, for example, the company offers its own range of premium accessories. “We are slowly building up the accessory range available in South Africa, and currently stock a variety of Milwaukee-branded accessories,” Koch highlights.

In terms of growth opportunities offered by Africa, Upat plans to introduce the Milwaukee brand into the Namibian market, while it is already represented in Botswana, Mozambique, and Zambia. “It is one of our resolutions for 2018 to expand into these types of developing markets. We have signed on partners to take on these areas for us,” Koch concludes.

## New heavy duty CNC lathe at MSC technical

OVER the past few years, the Port of Durban has seen larger vessels calling and this has put a strain on the resources that are at hand to speed up turnaround times and reduce the cost of doing business. The nine tugs being built by M/S SAS, for Transnet National Ports Authority (TNPA), will improve the ports operational efficiency, speed up vessel turnaround times and assist bigger commercial vessels.

“The R1.4 billion investment by TNPA is a step in the right direction, but there are many other areas that need to be addressed and the Port of Durban is under prepared for servicing the new generation of ships that are travelling the high seas these days. This includes logistics, infrastructure and manpower,” said Ravy Sankaran, Technical Director of MSC Technical Durban.

The new Yu-Shine VL-1000ATC +C heavy duty CNC vertical turning lathe that MSC Technical Durban has purchased comes with turning, milling and grinding functions. The machine has been supplied and installed by WD Hearn Machine Tools

“A recent case to highlight the challenges faced by the ship repair and engineering companies based here, was the freak storm that hit the area on the 10th October 2017 and the resultant damages to the harbour and ships berthed in the harbour.”

“One of the MSC Shipping Company container ships in the

harbour at the time – the MSC INES – broke its moorings and ran aground in the harbour entrance. Fortunately, the port authorities could expeditiously assist the vessel and secure her back to berth, but she did suffer major damage to her steering mechanism.”

### Engineering challenge

“This has created an engineering challenge for those that are involved in the repair work. Currently the Port of Durban’s dry dock (Prince Edward Graving Dry Dock) can only accommodate ships that have a width (beam) of 33.56 metres and less.”

“The damage caused to the stern block section of the MSC INES during the running aground includes the rudder blade, which weighs 131 tons, the stock, which weighs 29 tons and the stern block, including Rudder Horn that weighs in excess of 150 tons. The hydraulic rams for the steering gear, tiller arms and the other internal components suffered bending damage. The 101 ton propeller suffered damage to its blades and would be eventually replaced, at a subsequent dry-dock, in the near future.”

“The challenge is to remove these large components and once repaired, replace them again. A suitable dry dock would have facilitated this operation but as there are none to accommodate the size of the MSC INES, the repairs have thus to be done afloat and this presents a huge engi-

neering challenge. M/S Dormac has been contracted and assigned this work. Repairs of this nature to a vessel of this size and magnitude have not been done in South Africa before.” “Keeping this ship out of service for between three to four months is also going to be costly. Furthermore, the replacement components have to be imported. “MSC Technical Durban has evolved into being specialists in machining, welding and reconditioning of piston crowns and we repair and recondition a sizeable amount of the company’s requirements for piston crowns.”

After stripping and cleaning a piston crown and checking for any defects through NDT, MSC Technical Durban then begin a process of metal deposition.

“This is one of the main reasons why we have purchased the new Yu-Shine VL-1000ATC +C heavy duty CNC vertical turning lathe that comes with turning, milling and grinding functions. The machine has been supplied and installed by WD Hearn Machine Tools.

At the same time we purchased the latest version of Edgcam machining software and our machinists have been through some comprehensive training to get to know both the machine and the software.”

MSC Technical Durban has also developed and fabricated its own products that are now used throughout the MSC Shipping Company.

is one of the harshest construction environments in the world, second only to India. These best-of-breed power tools are rated to work in extreme temperature fluctuations as well.

This is one of the major European brands distributed in Sub-Saharan Africa by Upat, as its premium product offering to the construction industry and related trades. “Every job site can use

a Milwaukee power tool. There is a Milwaukee for every single application,” Koch reiterates.

Any servicing or repairs are carried out at Upat’s Johannesburg service centre. “The aftermarket is an important growth area for us, and we are looking at opening additional service centres in Cape Town and Durban as well,” Koch reveals. Customers can also determine spe-

cific part numbers on exploded views of the power tools on the Milwaukee website, which will then direct them to the closest dealer.

Upat does not only sell power tools, but offers extensive end user training as well. “We offer training with every single power tool we sell directly,” Koch notes.

This is important in terms of health and safety, as it ensures operators are fully aware

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# Virtual and real production worlds are merging

THE force with which the digital transformation is starting to steamroll automated production will be obvious at automatica 2018, in Munich from June 19 to 22. Terms like cloud robotics, deep learning and smart production are no longer just catchwords, but instead are increasingly becoming experienced reality.

Kuka: In a digitally networked system, in which all components are integrated in the cloud, two machining centres and a robot produce components for robots.

The rapid development steps of digital networking into factories is even surprising industry insiders. The reason for it: although "becoming smart" costs money, the investments are worth it. This has also been shown in a recent study entitled "The Digitalization Productivity Bonus: Sector Insights" by Siemens Financial Services (SFS). According

to it, manufacturers can achieve an annual increase in productivity through reduction of manufacturing costs by up to 9.8 percent thanks to automation and digitalization of their production systems. The enormous productivity gains help companies to free liquidity, with which they can finance investments in new technologies.

## Cloud-based production solutions

Numerous practical examples prove already how efficient and highly productive smart production can be. Kuka connects the analog and digital worlds in the manufacture of robot components in a fully automated, networked cell. The cell shows how a robot produces robot components in collaboration with two machining centers. A six-axis robot takes over handling of the cast components. With its work area extended over a



linear unit, it can operate both machining centers and additionally perform deburring work. Insofar, this is the analog world.

The digital world is connected through networking of all components with each other and with the Kuka cloud. In this context, all active components of the cell are integrated in the smart production environment. All data of the machines, robots, machining spindle, and the tools are collected in the Kuka Connectivity box, forwarded to the cloud, processed and visual-

ized in configurable overviews called dashboards. As a result, operators, maintenance and management have full transparency about the production process at any place and at any time.

## Digitally networked toolmaking

The Audi Competence Center for Plant Equipment and Forming Technology demonstrates the benefits of digital networking in the machining of forming tools. What people do not like are processes opposed to

digital networking. Consequently a robot machining center has now replaced four radial drilling works.

With this pioneering system, Audi has taken another decisive step on the way to Toolmaking 4.0. Gereon Heidrich, Head of Machine Technology in the Competence Center explains what it is all about: "Radial drilling works were previously used for inserting vent holes in forming tools. The disadvantages here: The process is not automated, time-consuming and involves high personnel costs. And: It does not fit to the concept Toolmaking 4.0, in which the digital networking of all process steps is required."

As of recently, a high-precision industrial robot TX200 from Stäubli has made the deep-drilled holes. The great advantage of the now consistently digital process chain: The positions for the holes, which used to be determined in a time-consuming process in the factory hall, can already be specified today in tool design in a CAD system and transferred into the offline programming system of the robotic cell. With this digital process, such time-consuming work is eliminated completely.

The result: a reduction of throughput times of approx. 60 percent.

## IoT automation will become a reality in Munich

The exhibitors at Automatica will prove that the future of industrial manufacturing will be completely networked as well as show which benefits result from it and how easy it is to implement the open networks required for it. It is already clear today: Many companies have the exhibition motto of "Industry 4.0", "Smart Factory" or "Digital Networking", and the innovations that will be presented in Munich have more a revolutionary character than an evolutionary one.

Example of Fanuc: The Japanese robot giant provides an intelligent platform for the exchange of data in real time with the FIELD system (Fanuc Intelligent Edge Link and Drive). Fanuc Managing Director Matthias Fritz stated: "We believe that FIELD is a milestone in industrial networking." Among the tried-and-tested modules of this platform, there is the operation management software "Linki" that captures, sorts, hosts and analyzes machine

data within the system. As a result, the "vital signs" of a machine can be monitored and conclusions drawn for preventive maintenance.

This sub-task is performed by "Zero Down Time" (ZDT), a module that is already being used successfully in the automotive industry. In the USA, General Motors has organized preventive maintenance for more than 10,000 robots with ZDT. However, FIELD can do even more: It also includes Industry 4.0 functionalities such as "Deep Learning", in which robots communicate their "experiences" with each other.

Robot and component manufacturers are currently working intensively on pioneering solutions to get the right data at the right place at the right time and consequently provide the basis for intelligent networking. The dynamism, with which digital transformation is changing industrial automation, makes the upcoming automatica the place to be for all providers and users of automation and IT. With its own topic area IT2Industry in Hall B4, automatica also provides a platform for IT vendors.

Source:  
Automatica Munich

## Machine Tools Africa a game changer

MACHINE Tools Africa (MTA) is set to take centre stage again in May 2020 at the Expo Centre in Johannesburg, South Africa. Enjoying strong industry support, the expo will remain a stand-alone show as it was last year, which was the first time in 20 years that the event had been staged as an independent exhibition. It had enjoyed many years running alongside the world-renowned Electra Mining Africa, but its need for increased exhibition space was matching the growth in the industry and a separate show became a necessity.

Over 5900 visitors attended last year's MTA to source new products and services and to find out about latest industry trends and technologies.

The MTA exhibition is a Machine Tools Merchants' Association of South Africa (MTMA) event in partnership with the organisers, Specialised Exhibitions Montgomery. Hans-Peter

Neth, chairman of the MTMA, is upbeat about the next edition of Machine Tools Africa. He said that exhibitors from last year's show achieved positive results and were extremely happy with the number and quality of visitors they had at their stands.

The importance of the machine tools industry to South Africa was demonstrated by a visit to last year's expo by Jeff Radebe, Minister in the Presidency. Following a walkabout at the expo, Minister Radebe addressed expo exhibitors and visitors.

He said that tools are the key to translating the potential of the manufacturing industry into a successful game changer for the country and the continent.

"The tool making industry has a greater role to play throughout the continent in partnership with other countries to encourage regional growth. Locally the industry is a vital base for many

manufacturing industries, such as the automotive industry." As such the industry has been earmarked as an important sector in the National Development Plan (NDP).

Gary Corin, Managing Director, Specialised Exhibitions Montgomery says it is of significance for a government minister to attend a show such as this. "The Minister's presence at last year's show is an endorsement of the importance of the manufacturing sector to the country and indicative of the government's belief that manufacturing is essential to this country. It also demonstrates the level of its commitment to the industry's future development."

High performance machine tools touch every aspect of our lives. "Machine Tools Africa 2020 will be the biggest trade exhibition of its kind in Africa," says Corin, "and a showcase of everything that twists, turns, rotates, cuts, forms, bends or shapes."



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# “Broken windows” takes hold in Cape Town suburb

THE broken windows theory is a criminological theory of the norm-setting and signalling effect of urban disorder and vandalism on additional crime and anti-social behaviour. The theory states that maintaining and monitoring urban environments to prevent small crimes such as vandalism, public drinking, and turnstile-jumping helps to create an atmosphere of order and lawfulness, thereby preventing more serious crimes from happening. - Wikipedia.

This is the backbone of the now 39 City Improvement Districts (CID) currently operating in Cape Town's mostly industrial areas where public minded citizens, business and property owners have come together to fund clean-up and security upgrades in the City's worse affected areas.

Operations Manager and ex-Police Captain Gary Bower from the Montague Gardens – Marconi Beam Improvement District (MMID) explains that their facility is a top-up to the City's security and cleaning operations which have been depleted as more of its resources have to cater for the growth of the entire Metro.

“Following an onerous establishment process, the MMID was established and registered as a Non Profit Company (NPC)

on 1st July 2017 and we are currently funded by more than 1500 members comprising property owners and business owners who as members, enjoy voting rights at general meetings of the NPC. The MMID covers an area of 38km<sup>2</sup>, bounded by Koeberg Road and the N7 and Stella Road to Bosmansdam Road” said Bower.

“The MMID operates six fundamental programmes aimed at uplifting and improving this area:

- Cleaning
- Security and public safety
- Social development
- Urban management and greening
- Marketing & PR
- Finance

There is a corresponding Director for each programme.

“Property owners are charged a levy on their rates account according to the value of their properties, which is paid to the City, who in turn pay it over to us to perform these top up services. The MMID has only has two full time employees, subcontracting essential services to specialist companies such as cleaning and security. With so many members, all making a contribution, we are a voice for the area and represent business and property owners at high

level with the City and the Province” continued Bower.

In addition to regular liaison meetings with City officials the MMID conducts monthly meetings with the local police Brigadier and is a member of the Joe Slovo Park Development Forum which represents residents of Joe Slovo Park.

The MMID, with its ear to the ground approach and close contacts with the relevant authorities, regularly report criminal behaviour and transgressions of by-laws.

“Particular challenges are illegal dumping, vagrancy, homelessness and vandalising of property. Drug abuse is particularly onerous in this area, attracting users and dealers into the area – sometimes in broad daylight.

“Then we have mounting social issues of vagrancy and homelessness – we recently attended to a young woman who gave birth on the street. Such cases have to be handled with compassion and referred to social services” he explained.

Assisting with management and liaison on a voluntary basis is Chairman of the Board of MMID, Jonty de la Porte whose property sales company is active in the area.

“Even though we have only been operating since July last year, we are already seeing positive improvements

to the MMID area” he said.

“We are tackling illegal dumping by having vehicles impounded and issuing fines. In a recent case, a culprit had to pay a fine of R15 000.00 to get his car back. Our clean-up team has removed tons of rubbish from open areas. We have held a number of clean-up operations where we partner with the Solid Waste Department of the CoCT. The initial clean-up operation saw the MMID employ around 20 unemployed people as part of their ongoing Social Development programme and the CoCT employed a further 45 unemployed people bringing to more than 100 paid helpers and volunteers from local businesses.

“Besides removing many tons of rubbish and rubble, often the result of illegal dumping, the operation also served as a warning to criminals that there is now a dedicated public safety force operating in the area. The MMID public safety officers will assist and co-operate with Law Enforcement and SAPS to enforce by-laws and reduce crime.

“Law Enforcement Officers from the CoCT join operations to deal with illegal traders and members of the CoCT Social Development Department visit homeless people and vagrants living in the



Jonty de la Porte (fourth from left) poses with the founding directors of MMID.

area.

“While the MMID is, by law, not allowed to respond to crimes on private property, it's vehicles are always on patrol in the area and will search for and detain criminals in the streets and public places. This contrast to previous years when the streets of Montague Gardens and Marconi-Beam were not actively patrolled at all, and criminals were free to move about at will, resulting in many break-ins and cases of vandalism particularly over the December shut-down period” said de la Porte.

The positive response to the MMID initiative from businesses, Law Enforcement and City officials is providing encouraging support from business owners to get involved in their local area and in some cases desist from illegal dumping activities by taking a pride in their environment.

Like New York City where the ‘broken windows’ movement resulted in a reduction of crime and perhaps more importantly a more radical approach to Law Enforcement, the MMID is certainly on the right track to taking back control of its largely industrial and commercial environment.

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## R900 million redevelopment of Cape Town's landmark Ambassador Hotel

THE old Ambassador Hotel, a landmark building with the most perfect location perched on the edge of the ocean in Victoria Road on Cape Town's Atlantic Seaboard, is currently being redeveloped into ultra-luxurious apartments by property developers Da'Realty – with completion expected by mid-2018.

With a redevelopment cost of R900 million, the end product of eight luxury presidential penthouses overlooking the ocean, capped by a show-stopping 770m<sup>2</sup> penthouse – with another 15 apartments across the road – is set to be as spectacular as promised by Da'Realty, property artists who have stated that this is a development of a calibre unseen on this continent.

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## Two exciting new office developments for Century City



Artist's impression of Sable Park.

TWO exciting commercial developments, including new offices for Discovery, are being developed by Rabie Property Group at Century City to meet ongoing demand from those wishing to relocate to this burgeoning precinct.

The first of these developments is Sable Park, which will bring 16 300m<sup>2</sup> of premium grade offices to the market by end June this year.

Being developed by the Rabie Property Group at a cost of R460 million, Sable Park will comprise two four storey buildings of 8 000m<sup>2</sup> and 8 300m<sup>2</sup> respectively, each with two levels of underground parking. Discovery has taken the larger of the two buildings and negotiations well under way with a number of global

players for the second building which is ideally suited for a large user looking to make a strong corporate statement but has been designed to be flexible and if needs be, could be sub-divided to accommodate two or three users.

Designed in a contemporary modern vernacular by the award-winning dhk Architects, the buildings will front on to Sable Road providing high visibility and offering uninterrupted panoramic views of Table Mountain and Table Bay.

Sable Park, which will bring 16 300m<sup>2</sup> of premium grade offices to the market by end June this year.

Sable Park falls within the all-Green Bridgeways precinct and been registered with the GBCSA, a Green Star rating in both the Design v1 and As Built v1 categories.

Designed for smaller users, the second new development is Manhattan which will comprise a mix of offices on the ground floor and residential apartments above in two attractive buildings of varying heights providing a staggered skyline.

The seven offices, range from 44m<sup>2</sup> to 114m<sup>2</sup>, but units can be joined if needs be. Rentals are from R8 000 to R25 000 per month.

Munnik Visser are the architects who are ensuring that the new development complements the existing buildings in the precinct but still imbues its own identity.

Both components of the R60m development have been acquired by an investment company for rental stock.

The development is expected to be completed by mid-2018.

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## The LNG Handbook

THE US Department of Energy recently released a handbook which is designed to provide insight on the benefits African countries can derive from the development of Liquefied Natural Gas (LNG) resources on the continent, a number of African contributors had a hand in the compilation of this booklet. LNG exports are an important compound for economic growth in African countries. Natural gas and LNG development can enable economic development and stimulate further investment in national infrastructure.

This handbook is the result of an effort by a diverse group of global experts who created it in the hope that it can facilitate a shared understanding between gov-

ernment officials and companies about the technical, commercial and economic factors that will spur investment in gas and power.

This handbook is intended to impact decision making with intent to develop natural gas. It does not promote any specific business model, but rather promotes better understanding of the stakeholders' shared aims in developing natural gas and Liquefied Natural Gas (LNG) projects and opening markets for LNG trade.

The handbook comprises 243 pages, with numerous charts, tables and figures illustrating a number of chapters covering global and local markets, capacity building, pricing, financing, and risk management, amongst others.

Visit [www.sagas.co.za](http://www.sagas.co.za)

## ESAB completes acquisition of Sandvik welding business

ESAB Welding & Cutting Products has announced that it has completed the acquisition of the Sandvik welding operations including production units in Scranton, Pennsylvania, and Sandviken, Sweden, the technical sales and product management organization as well as multi-year strategic collaboration on R&D for future product developments.

"Adding the Sandvik welding operations and its associates provides ESAB the opportunity to better serve customers with a broader and enhanced portfolio of stainless steel and nickel filler metals," says Shyam Kambeyanda, President of ESAB.

ESAB will be working over the next several months to integrate the Sandvik welding consumables business and operations to provide a smooth transition for customers worldwide.

Sandvik is a world-class developer and manufacturer of stainless steels and special alloys for demanding environments and has been one of the leading global suppliers of welding consumables for more than 80 years.

ESAB is a world leader in welding filler metals, with a portfolio including stainless steel, nickel and high-alloy filler metals, strip cladding electrodes and fluxes sold under such respected brands as Shield-Bright, Core-Bright, Arcaloy, OKâ Autrod, OK, OK Band and Stoodya. With the addition of the Sandvik welding products portfolio, ESAB offers an unmatched ability to meet

customer needs.

ESAB Welding & Cutting Products, established in 1904, is a recognized leader in the welding and cutting industry. From time-honored processes in welding and cutting to revolutionary technologies in mechanized cutting and automation, ESAB's welding filler metals, equipment, and accessories bring solutions to customers around the globe.

## Afrox presents Harvey Shacklock Gold Medal Award in honour of founding CEO

IN celebration of 90 years in the gases and welding industry and in honour of Afrox's founding CEO, Afrox presented the prestigious Harvey Shacklock Gold Medal Award at the 69th annual SAIW dinner held recently.

The award is significant to Afrox as it was introduced in 1949 in memory of Harvey Shacklock, the first CEO of Afrox, who was also a founding member of the SAIW. The award was presented by Afrox's 11th Managing Director Schalk Venter to Angel Krustev for his presentation entitled 'Modified GTAW orbital tube to tubesheet welding technique and the effect of a copper weld retainer during welding of alloy 825'.

The award is the highest accolade bestowed in the South African welding industry in acknowledgement of exceptional contribution to the industry in terms of research and innovation, and is granted to recipients who have presented technical papers of a very high standard, either on a local or international level.

Established by Shacklock in 1948, the Southern African Institute of Welding (SAIW) is a non-profit, technical organisation dedicated to furthering



L-R: Schalk Venter Afrox MD, Angel Krustev winner, and Morris Maroga President of SAIW.

standards in welding-fabrication and related technologies, and is a founder member of the International Institute of Welding (IIW).

Johann Pieterse, Business Manager for Manufacturing Industries at Afrox, says that the SAIW dinner is the biggest annual event on the southern African welding calendar and that the Harvey Shacklock Gold Medal Award is still highly significant to Afrox as it embodies their ongoing commitment to promoting welding in the industry.

This award is one of many accolades, training programmes, welding schools and skills development programmes that Afrox sponsors and actively supports each year in order to promote the

growth and expansion of welding skills and employment opportunities in southern Africa.

"Afrox also sponsored the Stainless Steel Awards Student Category to encourage South Africa's youth to consider welding as a recognised profession in a time of high unemployment," says Pieterse, adding that Afrox stands firm in their belief that skills development is key to growing the country's economy.

"Afrox also offers bursaries for learnerships and apprenticeships, and partners with training bodies to develop individuals into qualified artisans," continues Pieterse.

In addition, the gases and welding company actively participates in the advancement

of new training facilities and has played a key role in establishing welding training centres in Gauteng, the Eastern Cape and Western Cape. Most recently, the LIV Welding Academy, a custom container welding school that was developed by Afrox in partnership with LIV and the SAIW, was unveiled at the LIV Village in KwaZulu-Natal.

Pieterse says that Afrox has also partnered with the Department of Education, supporting its Technical School Recap programme under Mechanical Technology in a drive to re-establish welding facilities, kitting them out with advanced technology equipment and upskilling educators to facilitate training.

To date Afrox has up-

graded and equipped 14 technical schools nationally and trained over 40 teachers in the four main welding processes.

Since its humble beginnings as the Allen-Liversidge Industrial Gases Company, first opened by Shacklock on 1 April 1927, African Oxygen Limited has prospered by constantly meeting the needs of its customers and developing solutions that add value to their customers' applications.

Over the years Afrox's commitment and dedication to the welding industry in southern Africa has been unwavering, with the company's first welding school established during World War II. The school trained 5 000 welders to assist in the construction of armour plated vehicles and was charged with the manufacture of welding gear used by most of the South African forces.

Today, the company remains committed to training especially in view of the scarcity of suitably qualified artisans and other technical skills within the industry and South Africa at large, and therefore creates opportunities through learnerships and apprenticeships for the youth to enter the working world.



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# Air Liquide starts up the world's largest oxygen production unit

AIR Liquide recently started the world's largest oxygen production unit for Sasol, an international integrated energy and chemicals company. Air Liquide invested around EUR200 million for the construction of this Air Separation Unit (ASU) in Secunda, with a total production capacity of 5 000 tons of oxygen per day (equivalent to 5 800 tons per day at sea level). Owned and operated by Air Liquide, it is the first ASU that Sasol has chosen to outsource to a specialist of industrial gas production at this site.

Located in Sasol's Secunda site the new ASU supplies Sasol with large quantities of oxygen used for production of fuels and chemicals.

The start-up of the air separation unit represents a new milestone in the partnership between Air Liquide and Sasol which brings to 17 the number of ASU's delivered by Air Liquide over the last 40 years, with a total oxygen production capacity



greater than 45 000 tons per day. It is also the first time ever at Secunda that Sasol has chosen to outsource an oxygen supply contract, thus recognizing Air Liquide's expertise in the field of oxygen production and underscoring the importance of this long-term relationship.

The unit was designed and built by Air Liquide's Engineering & Construction team using leading edge technologies that meet the highest standards of safety, reliability and efficiency, while increasing production capacity. The ASU's design is based on Air

Liquide's proprietary technologies including several first of its kind innovations in the air compression process, which allow for an annual electricity consumption reduction of more than 20%, contributing to reducing the customer's carbon footprint.

As scheduled, the new ASU has been completed in less than three years from design to commissioning. This ASU also provides Air Liquide with a new source of liquid gases to supply the growing industrial gas market in South Africa.

François Jackow,

member of the Air Liquide Group's Executive Committee, supervising Middle East and Africa: "We are proud to be consolidating a strategic partnership built on trust and long-term commitment with Sasol. This project illustrates Air Liquide's capability to manage very large innovative projects. This new unit sees, for the first time, Sasol outsource its oxygen needs at its Secunda site, confirming our leadership in oxygen production technology as well as our commitment to contribute to South Africa's economic and social development."

Bernard Klingenberg, Sasol's Executive Vice President, Operations:

"The successful start-up of this world class ASU unit cements Sasol's long-standing strategic partnership with Air Liquide, bringing first rate oxygen supply expertise and long-term reliability to our Secunda operations. Furthermore, this important milestone ensures that our integrated Southern African value chain provides a robust platform for Sasol's long-term growth and sustained contributions to the country's economy."

## Energas powers Enertec's gen sets into southern Africa

R Schmitt Enertec's range of highly efficient and innovative power generators is now available in South Africa and the neighbouring countries through local supplier Energas Technologies. Depending on customer requirements, Energas will offer Enertec's wide range of generator sets with or without heat recovery and co-generation; the ENERGIN, ENERGIN GEN+ and ENERGIN CHP units, ranging from 115 to 500kW.

ENERGIN generator sets are designed for power production in island or parallel mode with other generators and/or the utility. Based on the R Schmitt Enertec M Series Gas engines, fuel options include natural gas, biogas, wood gas and LPG.

ENERGIN GEN+ are gen sets with heat recovery from engine jacket water, lube oil and first stage mixture cooling. Heat recovery in the GEN+ units increases the overall engine efficiency by 28% by utilising the thermal energy.

More than double the energy used to generate electricity is wasted in the form of heat discharged to the atmosphere. ENERGIN CHP units enable on-site electricity generation that captures heat that would otherwise be wasted to provide useful thermal energy, such as steam or hot water. Steam and hot water can be used for several processes such as space heating, cooling, domestic hot water and industrial processes.

Through ENERGIN CHP waste heat recovery, the total energy efficiency is increased above 90% compared to 42% of conventional technologies where only electric power is generated.

According to Laetitia Botha, Energas Technologies Product Engineer, Enertec's range of gen sets complements Energas Technologies' existing product offering. "Energas specialises in the supply of specialised equipment to the natural gas industry in South Africa and neighbouring countries. Generation of power by making use of natural gas, biogas or waste gas, complements the existing product range in our stable," explains Botha.

Enertec's generator sets can be used for pure electric power generation or a combination of electricity and thermal energy generation when waste heat recovery is included. Typical applications are diverse and include: Industrial – chemical, refining, pulp and paper, biogas, printing, food processing, glass manufacturing, drying plants and RDF gas; Commercial Buildings – hotels, health clubs, nursing homes and office buildings; Residential – apartments, planned communities and housing developments; Institutions – hospitals, prisons, colleges and schools; as well as Municipal – district energy systems and wastewater treatment facilities, among many others.

## Versatile and low cost pressure sensors

KOBOLD, represented locally by Instrotech, has on offer to industry the compact and versatile type SEN-98/99 pressure sensors. The tried and tested principle of a thick-film ceramic measuring cell ensures great reliability.

This pressure sensor meets the highest of performance demands by virtue of its robust construction, overpressure safety properties, as well as temperature stability and good reproducibility. The unit's overload protection limit is dependent on the measurement range, of which there are 31, running from -1...0 bar to 0...600 bar relative pressure or from 0...1 to 0...25 bar absolute pressure. There

is a choice of 4...20 mA, 0...5 V or 0...10 V analogue outputs for signal transmission. Fast, on the spot information of the measured pressure is made possible by the practical AUF type plug-on displays. Standard sensors have protection class IP65. The wetted parts are stainless steel, ceramic and sealing material FKM. The SEN-98/99 is manufactured with an accuracy of 0.5% as standard, an accuracy of 0.25% is available optionally.

The optimum design opens up a wide range of applications for pressure sensors, for example, hydraulic systems, compressors, refrigeration industry, welding, vacuum, water and oil, gases.

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# Package boiler for edible oil refinery in Ghana

JOHN Thompson, the boiler designer and manufacturer whose head office and factory is located in Bellville South, recently won a contract from a Europe-based international company for the manufacture and supply of an Enviropac package boiler for installation in a green-fields edible oil refinery being established in Ghana.

The plant is being set up in the port city of Tema to refine shea olein from locally grown trees. Shea olein is used for numerous applications in food and cosmetics.

Enviropac boilers are designed for firing a variety of fuels. "In addition to having the capability of being fired by oil and gas, they can be fired by bio-fuels, including shea olein. The boiler, to be installed as part of the refining



John Thompson Enviropac biofuel-fired boiler

process in the plant, will mainly be fired by local heavy oil but has the specialist equipment included to fire shea olein produced in the plant," explained Simon Boiskin, John Thompson's Export Sales Manager, Package Boilers.

The boiler, which

was manufactured, delivered to site and then installed by the client under supervision by John Thompson technicians during last year, is currently being commissioned. Thereafter, it will generate 12 tons of steam per hour at a pressure of 10 bar for the refinery.

The burner supplier for this project developed a special valve assembly to enable shea olein firing for the boiler. Ancillary equipment manufactured and supplied with the boiler includes an atmospheric de-aerator, a dual light / heavy oil ring main pumping

system, ducting and a stack, with provision made to accommodate an economiser to be supplied and installed at a later date should it be required.

The boiler and ancillary equipment have been designed and manufactured to conform with the latest European Pressure Equipment Directive 2014/68/EU and are stamped with the CE marking recently awarded to John Thompson. "Obtaining this important quality certification offers the significant benefit of helping to open the way to new business opportunities for our boilers in Africa that are owned and operated by Europe-based companies, as applies in the present case, as well as in Europe and other parts of the world", Boiskin commented.

## Reconditioned boilers save 40% of new price

EP Dryden Combustion is SA's leading supplier of reconditioned boilers. Purchasing a reconditioned boiler can save up to 40%. Added to this is a significantly reduced delivery time, typically half that of a new boiler. All Boilers are overhauled, parts requiring replacement are replaced and finally they are inspected by an approved third party accredited company. No Boiler leaves Dryden Works without being certified.

As part of Energy Partners, EP Dryden Combustion strives for energy efficiency, sustainability and cost saving. Dryden offers a whole array of products built around savings – money, time and downtime. With each boiler, new or reconditioned, the added option of an Optiflame High Efficiency Control Panel is highly recommended. This panel, developed, manufactured and supplied by EP Dryden, utilises VSD's and PLC with touch screen panel (HMI) which enables user friendly control of fans and stokers for optimized combustion efficiency. Combustion and steam pressure control parameters are set and adjusted on the HMI. Jaco Liebenberg, M&C Panel Divisional Manager, states "Our panels are innovative, responsive and we sup-

port our clients reliably. The panel is customizable and modular. The result is better efficiency and lowered operating cost." The unit is also available on a rental option.

Dryden's premises house a full Works facility in Alrode. Where work cannot be completed in the field, there are full facilities for repairs and boiler maintenance. Numerous teams are dedicated to 24/7 availability and cover all aspects of repairs and maintenance, including statutory inspections and coal and ash handling. Dedicated technicians also assemble hot water boilers on site and test before being delivered to clients.

Over and above this, a full store is equipped with a wide range of spares for all makes of boilers ensuring reduced lead time on orders. Excellent service as well as years of experience in the steam industry has led to spares of the highest quality being supplied from Dryden's spares division which includes spares for burners of all fuel types, backed up by 24/7 support and service.

Completing the product bouquet Dryden offers Steam Outsourcing options for long term steam solutions or Boiler Hire/Rental for shorter time periods.

# Energas launches new in-line deflagration flame arresters

ENERGAS Technologies, a supplier of high-end and specialised equipment to the oil and gas industries in Southern Africa, has launched the new Series 45000E / 46000E in-line deflagration flame arresters from its United States-based principal, Protectoseal. Launched locally in July this year, the units are designed to withstand low, medium and high-pressure deflagrations (subsonic).

With sizes from 2 to 12 inches and offering maximum operating pressure of 1,6 bar and maximum operating temperature of 60°C, the new flame arresters are bi-directional and capable of stopping a flame approaching from either direction in gas piping systems, and can be mounted vertically or horizontally in the pipeline.

"The Series 45000E / 46000E in-line deflagration flame arresters are designed to withstand low-speed, low-pressure and high-speed, high-pressure deflagration flame fronts," says Lavenda Sekwadi, Process Engineer at Energas. "The flow and pressure drop performance of these units is very competitive versus other manufacturers' units."

Depending on customer requirements, these units are available in three options: as deflagration arresters with no burn time, no taps for temperature devices;

short burn time arresters available with taps for the addition of thermowells and temperature probes; and short burn time arrester available with taps, thermowells and

temperature probes, all furnished by Protectoseal.

In accordance to directive 94/9/EC, all autonomous protective systems such as flame arresters need a

third-party certificate. "The Series 45000E / 46000E in-line deflagration flame arresters conform to the latest ATEX Directive and ISO 16852 certification," says Sekwadi.

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## ‘Extended’ suite of Bystronic automation solutions on for ultra-fast sheet steel processing

BYSTRONIC, represented in South Africa by First Cut, is a global supplier in the design and manufacture of workshop equipment including fibre lasers, press brakes, and software systems. Its focus is very much on providing the leading-edge in innovative solutions for its customers.

### Automation solutions for greater productivity

Bystronic's fibre lasers are renowned for their exceptionally fast output of finished components. This poses a challenge for the loading and unloading of raw materials, a challenge which the company has overcome with - among other automated solutions - the ByTrans, ByTrans Extended and the ByLoader automation solutions.

The ByTrans is linked to the Bystronic fiber laser and automatically loads steel sheets onto the fiber laser's shuttle table. After the cutting cycle is completed, the ByTrans also unloads the finished parts and residual sheets.

The ByTrans requires only 60 seconds in which to carry out the complete loading and unloading cycle. This means that the automation system is



always faster than the cutting plan that is being processed. For users, this means that the laser can cut uninterrupted for an extensive period of time. While the ByTrans loads one shuttle table, the fibre laser is cutting components from the raw material on the other table.

### ‘Extended’ solution with ByTrans Extended

Additionally, Bystronic supplies the ByTrans Extended. This features not one but two cassettes, which increases the automatic capability of the system. This option offers greater flexibility as it can not only store and return, but can also handle the removal of large parts. The ByTrans Extended can also prepare plastic protective separators, which are placed between the steel sheets. The ByTrans Extended is available in 3m x 1m and 4m x 2m options.

Bystronic's latest

fibre laser solutions are processing raw material substantially faster than earlier systems such as CO2 laser. However, the laser forms the ‘hub’ of an extended automation system, which includes downstream processes such as punching, bending and welding. However, where space in a manufacturing facility is constrained, The Byloader automation system is a compact loading unit that is positioned on the side of the laser system's shuttle table. The system supplies raw metal sheets to the laser without taking up unnecessary space.

The ByTrans, the ByTrans Extended and the Byloader are operated using the ByVision Fiber's touch screen. Bystronic has seamlessly integrated the control of the two automation systems into the fiber laser's operating software. This enables users to perform all the operating steps on a single touch screen.

## SAIW acquires Cape Town-based NASA

THE Southern African Institute of Welding (SAIW) has acquired the assets of Cape Town-based NDT Academy of South Africa (NASA) with effect from 1 January 2018. According to SAIW executive director, Sean Blake, the acquisition is in the interests of both parties and the industry as a whole.

“SAIW has traditionally not offered Non-Destructive Testing (NDT) training services in the Western Cape and, with this acquisition, it will now be able to offer in Cape Town its ISO 9712-accredited NDT training courses which complement its Welding Inspection and Welding Technology courses already offered through SAIW Cape Town,” he says.

In line with the agreement, NASA Cape

Town will cease to trade and its clients will be serviced from expanded SAIW premises at the current location in the Milpark Centre on Koeberg Road.

Utilising the combined course material, infrastructure, systems and procedures from SAIW and NASA Cape Town will result in synergies and cost-efficiencies for all concerned in and around the region. “For our members and other industry players, their NDT, weld inspection and welding needs will be better and more cost-effectively met with this arrangement,” Blake says.

NASA Cape Town CEO, Ben Buys, who will continue as a SAIW lecturer, is delighted with this development. He concurs that the acquisition is to the benefit of both organisations and the industry



Sean Blake (left) and Ben Buys shaking hands on the acquisition.

as a whole. “In line with our ongoing drive to expand NDT services in the Western Cape the acquisition of NASA Cape Town by SAIW,

which has a solid reputation, excellent skills and infrastructure, will be a significant boost to us realizing this goal,” he says.

## Allied Steelrode supports the ‘sisters of steel’

GWEN Mahuma and Monika Pretorius are respectively Business Development Director and Managing Director of BBD Steel Supplies. Since its inception in 2014 – and despite the extremely tough economy of recent years – the business has doubled its turnover every year since then. From a

three-person start-up, it now employs 27 people in a 75 percent black women-owned business, working from a well-equipped 4 000m<sup>2</sup> facility.

Mahuma and Pretorius have both had previous experience in the steel sector. “While we also have a similarly strong entrepreneurial drive, we realised early on that we needed to have the synergistic benefit of a senior, successful industry player and mentor,” explains Mahuma.

They found such a strong supporter and mentor in seasoned steel supplier and processor, Allied Steelrode.

“From our side, we had been contemplating establishing a branch in Pretoria to service the automotive heartland and other industry sectors in this region,” says Chadha.

However, when Pretorius and Mahuma called on Allied Steelrode at its facility in Alrode, the commonality and synergy between the two companies in terms of a dedication to quality, customer service, integrity and reliability was evident to Allied Steelrode's CEO, Arun Chadha.

“Much like Allied Steelrode, BBD is owner-driven by self-made entrepreneurs; and, as such, also has the decision-making agility, flexibility and robust approach required to succeed in today's challenging and dynamic steel market,” Chadha explains.



Monika Pretorius, Arun Chadha and Gwen Mahuma.

“Every parastatal in this country – and many in the private sector too – want to see empowered women in business. And while there are many women in business in South Africa, there are very few top executive women in the steel business, which has always been very male-dominated,” Chadha continues.

“The potential for a fully woman-owned steel company in Pretoria is excellent as this area experiencing good industrial growth.”

“There is also no major steel business in this area, as most are based in Johannesburg, some with minor outlets in Pretoria. Importantly, there is no other company here offering stretcher-levelled steel. Our branded ASSM (Allied Steelrode Stretcher Material) is used by Transnet in its ongoing locomotive renewal programme – also one of BBD's major customers.

“It is an ongoing educational process because customers are

often unaware of the quality of stretcher-levelled material. However, when they have used ASSM material once, they do not want anything else – as they quickly realise that the benefits are tremendous,” enthuses Pretorius.

“We now have SABS certification in addition to ISO 9001: 2008 certification, and are proactively marketing our value-added steel products – including Allied Steelrode's ASSM – to these companies,” she comments.

In these efforts, Allied Steelrode supports the company wholeheartedly – from a mentoring perspective, but also in terms of stockholding and with BBD being their local representative of their iconic ASSM branded product.

“Furthermore, we are a bulk supplier and not a merchant, so BBD extends our footprint throughout Pretoria and northern environs,” Chadha explains.

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# Logistics is not Supply Chain

NAPOLÉON famously said, "Amateur's discuss tactics, the professionals discuss logistics", he should have added... "but those with the advantage discuss Supply Chain". Napoleon is often referred to as being the grandfather of Logistics thanks to his first use of a regiment solely dedicated to the supply, and transport of equipment. Until this point armies at war had relied on looting and requisition to support troops on the march, which left them susceptible to weakness should the opposing commanders employ "scorched-earth" policies. After Napoleon's Train regiment, the concept of moving equipment with an army firmly took hold, and the art of Logistics – as a process of getting the right product, to the right place, at the right time was born. More than 180 years later Logistics evolved into a more holistic view of business, becoming Supply Chain management. This modern view encompasses all activities involved in the sourcing of raw materials, manufacturing and distribution of the final product to consumers. In recent time, the field has grown further to include end-of-life functions such as reverse Logistics, waste management and the circular economy, as well as data-driven functions such as payment solutions and data transfer and analytics. Arguably, Supply Chain is, therefore, the lifeblood of any organisation.

In simple terms, Logistics is the tactical function within the greater supply chain, including activities such as inbound/outbound transportation, order fulfilment and warehousing. Supply Chain is the broader term for the connection between source and consumer, including functions such as supply/demand planning, procurement, manufacturing and indeed logistics. At its heart, Supply Chain is the interconnected activities of multiple companies aimed at transforming raw materials into consumable products. The coordination of such activities falls under the banner of Supply Chain management, and the effective coordination results in competitive advantage.

The key differences between Logistics and Supply Chain are:

1. Logistics refers to the physical movement and storage of goods within a single organisation to create customer satisfaction. Supply Chain is the integration of activities from

multiple businesses to create competitive advantage within an industry. For example, Supply Chain focuses on farm-to-fork, Logistics delivers to the supermarket.

2. Supply Chain is the greater strategy, Logistics' is a tactical function thereof. Supply Chain is the

coach, Logistics the team captain – they both provide direction, but the coach provides the game plan, and the captain executes the moves.

3. Supply Chain considers every aspect and process needed to produce and deliver a product, including suppliers,

intermediaries and customers. Logistics focuses on the planning and execution of the movement of goods.

Despite being remarkably different concerning scope and objective, Logistics and Supply Chain remain interconnected. Arguably Logistics cannot exist without Supply Chain, and any

Supply Chain would fail without Logistics. Perhaps the conclusion to be drawn is that to extract the most value from your logistical activities, you not only need leading tactics, but a greater view of the end-to-end supply chain in order to gain maximum competitive advantage.

Source: Barloworld Logistics.com



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## Creating a logistics command centre - case study

SASOL Oil (one of various business units in the Sasol Group) markets fuels blended at Secunda in Mpumalanga and refined at the Natref oil refinery at Sasolburg in the Free State. The unit operates around 416 Sasol and Exelretail convenience centres in South Africa, exports fuels to southern Africa and supplies various large commercial customers with a combination of fuels including diesel, jet fuel and petrol.

### The problem

As part of the broader Functional Excellence review of processes in the Sasol group, it became apparent that the business as a whole was not maximising efficiencies in and across business units with respect to outbound logistics. The historic decentralised approach to logistics planning, execution and analysis at various levels had a number of deficiencies including lack of visibility, control and optimisation. In a high value, customer focused value chain, this is simply not good enough, leaving various opportunities to increase value untapped on the table.

### Solution

The broader Functional Excellence initiative had as its objective to implement simple, standard and shared practices that would assist Sasol to achieve its objective of being a world class supply chain organisation and achieve greater efficiency in execution, while also improving service delivery. As part of this initiative, the outbound logistics activities in Sasol would be executed in conjunction with the business units, according to agreed service levels, by a world class, technologically enabled Logistics Command Centre (LCC) that would continuously exploit logistical synergies toward increasing related efficiencies, while achieving benchmark levels of effectiveness.

To start this journey, it was decided to establish the LCC platform inside the Sasol Oil business unit (primary and secondary distribution) and expand it from there to incorporate road logistics in other business units, and then to develop it further to include rail and other modes of transport.

This intervention fundamentally changed the nature of the outbound logistics process in the business from a decentralised, Excel-based operation to a centralised, integrated and technology enabled service. The journey consisted of various transformation initiatives over a period of time, designed to ensure acceptable risk levels, maximising value extraction and ensuring sustainable change. The journey impacted on all three dimensions of process, people and technology change.

**Process transformation**— this included the design and implementation of processes that supported the operational objectives of efficiency, customer service, standardisation and simplification. Key challenges in this regard included the alignment of stakeholders up and down stream, ensuring that changes in localised processes supported the objectives of external stakeholders. A common set of supply chain objectives across the various stakeholders simplified this challenge. Key processes that were redesigned and implemented include logistics planning and execution, event management as well as reporting, analysis and performance management.

**People transformation**— the objective was the establishment of a uniquely structured, centralised, skilled and dynamic team responsible for achieving clearly defined business objective. A unique element in this regard is a joint structure staffed 50 percent by Sasol employees and 50 percent by Resolve Solution Partners, with a transfer clause to facilitate full ownership by Sasol. The objective was to tap into the skilled resource pool of Resolve (Resolve provides similar resources to similar platforms in other industries), but also to ensure a balance between experience and innovation by retaining some of the Sasol Oil employees who historically fulfilled a similar role. Throughout the people transformation process, no employee was retrenched.

**Technology**— a fully integrated technology platform supporting the LCC processes and responsibilities was implemented to form

the backbone of optimisation, operational efficiency and visibility of the outbound logistics process. The platform consists of the OPSI PLATO optimisation platform, custom web modules to facilitate the driver briefing process, a reporting and analysis platform, tight integration to SAP through web services and real-time feeds from the vehicle tracking devices. Some of the technically unique elements includes multi-drop, multi-compartment scheduling and multi-product scheduling

### Implementation

The project was conceived in January 2011, following a comprehensive partner selection process. First phases included the definition of a clear project charter, risk assessment and stakeholder analysis. Design work and planning were completed by end April 2011, incorporating input from wide spectrum of stakeholders. A phased approach was suggested to manage risk, extract value from early interventions and to build momentum in the project.

The “interim planning solution” initial phase was proposed as intervention where a skeleton staff of the logistics command centre would prepare daily schedules, while the required integration and further development continued. The schedules were generated daily, utilising manual data loads and no development. Detail feedback and discussion sessions were held between the actual drivers, the distribution team and the scheduling team. The objective was to incorporate real-life input already from a very early stage in project, which might have been overlooked during the design phase.

In parallel to the interim planning solution phase, the development of the required peripheral platforms as well as the integration work to the SASOL ERP continued. The workforce transition process also started. This phase included substantial effort with regards to training, testing and change management.

The LCC took on its full role for one of the major Sasol Oil depots in Gauteng in April 2012. One of the biggest petrol price increases in his-

tory occurred at the end of April 2012, in conjunction with an extended long weekend. The combination created havoc in the distribution chain, and highlighted some issues with regards to how the platform, integration and staff reacts in abnormal circumstances. It was decided to postpone the roll-out to subsequent depots to ensure these deficiencies were corrected through process review, technology adjustment and additional training.

The roll-out to subsequent depots was completed by December 2012.

### Results

The LCC is responsible for all of Sasol Oil's road logistics, ensuring that fuel stations receive their deliveries in an optimised, cost effective and low-risk manner. Some of the outcomes from business changes included (measured as part of the three-month post-go-live business case review) a substantial increase in payload utilisation and trips per vehicle.

Other benefits include better control through centralisation, improved vehicle movement control, visibility, standardisation and reduction of manual system intervention. The central control room has brought decision-makers together, including the right information, to facilitate better decision making, especially during times of crisis. Vehicle movements are now better controlled. Decisions historically left to drivers or dispatchers now reside on the level where it needs to be, resulting in better collective decisions, including the reduction to deviations from route and improved driver performance. Both of these benefits are only possible with the right visibility of information. Through the platform, a wealth of real-time information (both operational execution as well as analysis) is available to drive customer service and improvement agendas. Process standardisation across depots makes it possible to collectively improve. One example is that the creation of shipments, historically done manually at each depot, now takes only a few minutes to complete.

### Unique elements

The concept of a centralised logistics control centre has over the

past few years showed substantial benefit in the South African market, with more and more companies investing in this area. This project however included some unique elements that distinguished it from the rest.

The design and planning was, from the start, based on a build-operate-transfer model between SasolOil and Resolve Solution Partners. The objective was always a partnership, not a technology implementation or an outsource model. It ensured close involvement from both parties during all phases (Sasol Oil because they would inherit the platform in near future and Resolve because they will be involved in the everyday operations of the platform). It also provides both parties time to adjust the design during the operational phase to ensure maximum value before it is transferred to full control of the client.

The team structure was designed as a 50-50 partnership, with some resources from Sasol Oil and some from Resolve Solution Partners. This provided for the right mix of environment experience as well as technology skills. It also gave access to a “joint resource pool” to ensure continuity as well as the availability of skills needed for the roll-out to other business units.

The unique business environment required significant learning curve and adaptability from the technology capability. Industry specific nuances included compartment loading, hosted and shared depot structures.

### Future

The future holds exciting potential for the operations including the continued improvement and stabilisation of the LCC environment to provide a supporting platform for bolder tactical improvements. Leveraging the vast amount of information generated will enable the use of the LCCbase to pursue more sophisticated business opportunities. There is already a recognised potential to roll out to other Sasol business units.

Serious consideration can be given to the incorporation of rail and other modes of transport, and it has become easier to instil a new, continued drive to improve the outbound logistics performance.



## Cylindrical sensors offer strength

COUNTAPULSE Controls reports that the Leuze cylindrical sensors offer a higher mechanical strength than the standard sensors. Engineered for particularly arduous conditions, the Leuze 328 series sensor is based on the optical platform of the well-known standard Leuze 318B series, however this new device features a metal sleeve in the housing.

The operational sensors available in the new Leuze cylindrical series, which range from throughbeam photoelectric sensors to retro-reflective photoelectric sensors to light scanners with sensitivity adjustment via teach button, are de-

signed with the option of either a cable or plug connection. An adjustable retro-reflective photoelectric sensor model with a polarisation filter is also available for particularly tricky applications.

With ranges of up to 15 metres (throughbeam photoelectric sensors), six metres (retro-reflective photoelectric sensors) and one metre (light scanners), the new Leuze cylindrical sensors are ideally suited to a variety of applications for object detection in materials handling and packaging technology.

The cylindrical sensors are especially popular for integration into constricted production facilities as



*The Leuze cylindrical sensor, available from Countapulse Controls, offers a higher mechanical strength than the standard sensors.*

well as into assemblies in transport systems or other machinery. In many production processes and internal transport systems,

these optical sensors are used for the detection of objects and thereby control processes or partial steps. The highly visible light spot facilitates alignment and two anti-vibrant outputs expand the application options.

The quality engineered and manufactured range of Leuze sensors is available from Countapulse Controls who has been providing sensing solutions to business across southern Africa for more than forty years. This Johannesburg based company also operates a technical hotline to ensure that customers have ready access to relevant applications and operational information.

## GHM group acquires measuring technology expert Valco

THE GHM Group has acquired Valco srl, an Italian measuring technology producer for level, flow and temperature sensors for machine and process automation.

"I am very pleased to welcome Valco to the GHM Group. The acquisition enables the GHM Group to offer to our customers an even broader range with the entire manufacturing excellence and in-depth knowledge of the processes in many different applications both in process industries and machine building," said Johannes Overhues, CEO of the GHM Group.

GHM Messtechnik South Africa, Managing Director Jan Grobler commented "This is an exciting addition to the GHM Group and will most certainly enhance our footprint in the petrochem and oil and gas sectors in the Southern Africa region. Valco is renowned for their high accuracy and quality measuring technologies".

Several synergies arise with the combination of Valco's expertise and technological competence with the skills and capabilities



of the GHM Group.

On one hand, this specifically expands the range of industrial sensors of the Honsberg Competence Centre, the experts within the GHM Group for flow and level sensors. On the other hand it extends expertise of temperature sensors and electronics, which harmonises ideally with the temperature Competence Centre Greisinger and the industrial electronics Competence Centre Martens. The GHM Group will apply the successful GHM methods and further invest in Valco's R&D and sales activities.

"The market strategies of the GHM Group and Valco are very closely aligned, based on a common

commitment to customer-oriented solutions and collaboration that has already been established for decades. Therefore, we expect a smooth integration of our company into the GHM Group. With our combined strengths, we will continue to develop our comprehensive product portfolio for the benefit of our customers," said the founders of Valco.

"With our compatible products, market expertise and innovative technologies, the GHM Group and Valco now have even more impressive value advantages with which we accompany our customers into the fourth industrial revolution," concluded Johannes Overhues.

## Heat tracing ensure free flowing bitumen

THE demand for bitumen worldwide is estimated to be over 100 million tons per year; a significant amount which emphasises the incredible demand for the product and its various applications.

In South Africa, most of the country's surfaced roads have bituminous coating – approximately 90% of the bitumen refined as an end-product from petroleum is used locally as road or airfield paving.

Bitumen is also regularly used by SA construction and engineering industries as it is a strong, readily adhesive, highly waterproof and durable material.

### To flow freely

For optimal use, bitumen must flow freely from the relevant storage containers to the point of application. Unfortunately, due to its high viscosity, it is notorious for blocking pipelines and causing delays.

Therefore, when working with bitumen the product's high viscosity makes it a serious challenge to handle and work with.

Getting the right heating system onto your tanks and pipes is therefore essential if delays are to be avoided.

Electrical heat tracing (EHT) has in recent years become a highly effective heat regulating system for the bitumen industry and is today used at various high profile suppliers in the country.

Currently, heat tracing can be used on:

- pipelines carrying bitumen;
- storage tanks containing bitumen;
- tankers transporting bitumen; and
- Heated hoses which connect storage facilities to point of use.

Comments Giles Maynard, General Manager of eltherm South Africa: "In South Africa, incoloy elements and gas torches are often used to regulate the temperature of bitumen storage and transport systems. And while incoloy elements and gas burners have a higher Watt density rating, this often burns the product which leads to unwanted carbon build up and blockages.

"In turn, the build-up can lead to a compro-

mised product when the burnt bitumen mixes with the rest of the product. With EHT, however, heat is distributed evenly over tankers, tanks, pipelines, valves and hoses, regulating the temperature and viscosity and ensures the quality of the product is not compromised.

With an EHT system, lower maintenance temperatures can also be set which in turn offers significant energy savings and OPEX cost reduction.

### EHT success

Looking at a real-world application, an EHT system was recently installed at a prominent local bitumen supplier where a self-regulating cable was fitted to pipes across the process plant, preheating them to between 120 and 130 degrees Celsius.

The heat tracing system regulates the pipes' temperature when the plant's pumps aren't running, therefore, preventing the bitumen product from solidifying and clogging up the pipes. Apart from pre-heating the pipes the

heating system also ensures a lower viscosity on the product.

The plant previously used high watt density elements which led to issues such as the pipes' temperature exceeding the required specifications resulting in the degradation of the bitumen and a skin forming inside the pipe. High watt density elements, depending on their quality, have a tendency to fail every few months.

Explains Maynard: "One of our heat tracing systems is self-regulating; the temperature can therefore not exceed the stipulated design parameters. Also, due to the good heat distribution inside the pipes, the bitumen is now more viscous which makes it easier to pump, mitigating down time and potential loss of earnings.

"There is no doubt that EHT is a feasible and highly effective heating solution for the bitumen industry. At eltherm South Africa we've had a number of very successful projects and believe heat tracing forms a crucial component of the bitumen value chain."



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## Premier concludes controlling interest in Talhado

JSE listed Premier Fishing and Brands Limited (Premier, has concluded the acquisition of a controlling 52.51% interest in Talhado Fishing Group (Talhado).

The acquisition is one of the largest made by Premier since its listing in March last year and is said to be of significant strategic value-add to the Group.

Talhado, which is based in the Port Elizabeth harbour, is involved in the catching, processing and marketing of squid, with both sea and land-based freezing facilities and operates from the east coast. Talhado is the largest squid player in the South African fishing squid sector. This acquisition is expected to complement Premier's diversification strategy and product

basket. Premier's current products include south and west coast rock lobster, pilchards, anchovies, hake, squid and abalone.

Samir Saban, chief executive officer of Premier Fishing and Brands limited said, "This acquisition will lead to further synergies among the existing operations and enhance value to shareholders of Premier. Talhado has a solid asset base in the squid sector and benefits are expected to be realised in the short to medium term, which will lead to additional efficiencies within the existing operations and the overall group."

He added that it is Premier's strategy to grow organically and through acquisitive growth.

CEO of Talhado, Mr Malcolm Stanley,

says, "This partnership is critical for the future growth of our two companies which have shown remarkable organic growth over the past 25 years. The company's agility will enable Premier and Talhado to further leverage its enviable presence and reputation in the South African market as well as to our export clients."

The Purchase price in respect of the 52.51% interest has now been confirmed at R101 022 811.00. The Talhado Fishing Group reported revenue in excess of R300 million as well as profit after tax of R61 million for the August 2017 Financial Year end. The net assets of the Talhado Group at 31 August 2017 was in excess of R88 million.

## Chinese fishing trawlers spotted off Shelly Beach

WHETHER South African waters were again being pillaged by foreign fishing vessels was but one of the questions asked on social media last Friday after six Chinese fishing vessels had been seen just off Shelly Beach.

Claims were made that the vessels were fishing illegally; however, due to a lack of staff employed within the communications department at the Department of Agriculture, Forestry and Fisheries, our request for details for the vessels went unanswered.



The Yang Ming 8001.

Making use of an online marine vessel tracking application, the Mail was able to locate the six vessels, later identified as Yaog Ming 8012, Yang Ming 8008, Yang Ming 8032, Yang Ming 8002, Yang Ming 8007 and Yang Ming 8001.

Of the six vessels alleged to have fished

illegally in South African waters, three had seemingly switched off their transponders – meaning that they could not be monitored electronically.

The Yaog Ming 8012's last received position remains off Shelly Beach.

Source: South Coast Herald

## Bait and wait

THE consolidation of the local fishing sector is now well underway with news that hake specialist Sea Harvest will lead a black empowerment consortium to acquire control of Viking Fishing Holdings.

Cape Town-based Viking Fishing has been controlled by the Bacon family since 1980 with operations spanning hake, pilchards, sole, prawn, monk, snoek and angel-fish. The company owns and operates a fleet of 31 fishing vessels, and boasts a sizeable seafood processing facility in the City of Cape Town as well as smaller facilities in Mossel Bay and Durban.

Sea Harvest's attempt to hook Viking follows the acquisition of the Saldanaha Group's fish canning business by the TerraSan Group and Premier Fishing's acquisition of the Talhado squid business in Port Elizabeth.

According to shareholder communication, Sea Harvest – which is controlled by Cape Town-based empowerment giant Brimstone – is also looking at a 51% stake in Viking's burgeoning aquaculture venture (which includes abalone, mussels and oysters).

The securing of empowerment credentials is key for Viking, which last year lost a huge chunk of its inshore hake allocation when the total allowable catch was spread amongst a host of smaller fishing enterprises.

Fishing sector sources have long anticipated an increase in corporate action as the 2020 fishing rights allocation draws closer.

Sea Harvest, which raised substantial capital of more than R1.3bn



during its listing in early 2017, is well positioned to make acquisitions. But the price the Brimstone-led consortium will pay for Viking is not clear at this juncture. One would assume Sea Harvest probably had the upper hand around the negotiating table with Viking still smarting from its inshore hake loss.

In any event, with the financially muscular Brimstone as a supportive shareholder, Sea Harvest should be able to easily manage landing a fairly large transaction without interrupting dividend flows.

The Viking deal will make Sea Harvest the biggest hake player in South African waters and considerably bigger than I&J, its rival in the frozen hake fillets segment. At last count Sea Harvest's share of the local hake market was 41% – but its total allowable catch was only around 25% (plus 3% if its arrangement with Vuna Fishing is included).

The tilt at Viking follows Sea Harvest's decision to invest R250m in acquiring and re-fitting a new fishing vessel, the MV Therney.

The deal also adds considerable diversification to Sea Harvest's

South African fishing operations, and may even offer platforms to build commanding seafood niches like pilchards, prawns and snoek.

Another synergy could come from Viking's wholesale attributes via a network of factory outlets where a wide selection of fresh and frozen seafood is on offer. Sea Harvest has also recently moved into a retail mode with a growing chain of shops and factory shops in the Western Cape and Gauteng.

Other than its core hake operations, Sea Harvest also controls Mareterram, an Australian seafood business that comprises prawn, scallop, crab and mackerel fishing interests.

Whether the Viking acquisition is the first step in a transformation journey for Sea Harvest remains to be seen. There is talk amongst the quays that Sea Harvest has ambitions to become a SA champion in the fishing sector.

Premier Fishing – which is centred mainly on the export sector via lobster and abalone – might also have similar ambitions. Premier Fishing was tipped as a contender to acquire I&J's hake business

from consumer brands conglomerate.

But talk of that deal has died down in recent months. It is possible AVI had opted not to sell its fishing interests, but rather list these valuable and well managed operations separately on the JSE with a more meaningful empowerment shareholding.

Other than I&J, AVI also owns Simplot (an Australian seafood business) and a large abalone farming venture at Danger Bay (which has an annual 300t capacity).

Premier Fishing has also made it abundantly clear that it will not overpay to acquire new fishing operations. Perhaps Premier – which will invest heavily in increasing its Gansbaai abalone plant's production capacity – will be more content to take smaller bites rather than trying to swallow a huge business like I&J.

Meanwhile, Oceana – the largest fishing company in Africa – has hinted openly that it has an appetite for aquaculture ventures.

The beauty of aquaculture ventures is that there is no allocation of catches that can add risk to a fishing company's operational profile.

Mischiefous murmurings have suggested Oceana might look at well-established aquaculture ventures in Southern Africa – with Abagold (which is making a steady recovery from the red tide setback in early 2017) and I&J's abalone operations cited as possible targets. Oceana, of course, has the wherewithal to start up its own aquaculture venture as well.

Meanwhile, Viking Aquaculture made an interesting move to acquire a 30% stake in Abagold's Specialised Aquatic Feeds (SAF) business. This could well be the start of a closer arrangement between Viking and Abagold, especially if Sea Harvest does successfully take over the former business.



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# OPINION

## Pump attendants lose job protection in the US

Continued from back page

station operators (not the same thing) would like to go the self-service route. It would be cheaper and more efficient. It is amazing how adept people get at using the pumps (our trade unions please note) and some actually like the experience. It makes a change from staring at a computer screen all day.

It may surprise some readers to be told that some states in the US have banned self-service at fuel filling stations for reasons similar in some ways to those followed in South Africa – “pumping gas” as they call it is a way of providing work for people unsuited to doing anything more complicated. Yes, even in the US there are such people.

But in that land of free enterprise where the logic of the market is (or often is) supreme, it is raising its head again and turning its beady eye on the jobs of what are sometimes benevolently called “pump jockeys”.

Recently, the State of Oregon made it legal for motorists to pump their own gas.

The shock and horror among ordinary motorists of that fair state was immediate. Social media was full of the outraged cries against this needless meddling with a fine old tradition, dating back to the antiquity of 1951.

People in their 60th year claimed they didn't know how to operate a fuel pump and refused to learn how. Others claimed

they hated the smell of petrol. Some even alleged that letting the gormless public operate the pumps was unsafe. A few more sensibly noted that people with disabilities would welcome the help.

Not surprisingly the humourists got in the act, one claiming, “It's official. Oregon is full of mentally defective, full grown children, incapable of the most mundane of adult task”.

Actually, it was already possible to “pump your own gas” in Oregon for couple of years before the blanket ban (in isolated areas) as long as you did so at night when there were no attendants on duty and pumps were already able to accept cash or cards in payment. It was a safety issue. No one should have to spend the night in the wilds of Oregon for lack of petrol. So the change when it came was not exactly a shock. Everyone expected it.

In fact Oregon was not alone in its ban on self service. The State of New Jersey still bans self-service at fuel stations and has done since 1949. It is now the only ban in the whole of the US including Hawaii.

New Jersey even imposes stiff fines on any motorist daring to touch the pumps (trade unions are still strong in New Jersey). Do it twice and the fine is doubled.

The Jersey motive was allegedly first and foremost safety. People might smoke

on the forecourts. They might not turn off their engines while the pump was running. Forecourts needed to be policed.

Very sensible you might think, even if there have been more than a few cases in this country of damn silly behavior by motorists even when attendants are there ostensibly to make sure human stupidity does not rule. Like, for instance using a cigarette lighter to peer into a fuel tank to see if it was full (I kid not) which once happened in Pietermaritzburg. Yes, he died.

But, sensible or not, the ban on self-service in Jersey was actually motivated by service station operators who wanted to stop others offering discounts if motorists helped themselves. So much for competition, a free market, and the power of political lobbying. There have been attempts to reverse the New Jersey law against self-service. One lawmaker said he was embarrassed by people who jeered that New Jersey citizens were mentally incapable of operating the fuel pumps. But his feelings cut no ice with his fellow State Congressmen and women. The law stays.

So that leaves only New Jersey and South Africa with self-service at fuel filling stations banned, and the employment of pump attendants compulsory.

We at least have a better motive than the Americans.

## RET done right is economic inclusion

AS more South African politicians and policymakers call for “radical economic transformation” (RET) and others are suggesting “smoke and mirrors”, Deon Oberholzer, CEO of Gestalt, says RET is not possible without a radical change in the way South African businesses see transformation as a whole.

“Shortly after President Zuma's State of the Nation address some months ago, ‘radical economic transformation’ became a buzzword; almost a chant among those jockeying for favour in the business arena,” says Oberholzer. “What isn't being made clear yet, however, is the fact that transformation – as it stands today – will end just one layer deep into the supply chain in the mining industry.”

Oberholzer highlights the shortfalls of the Mining Charter as an example of how the term “transformation” is misleading, in light of the absence of any true measurement. “The current version of the Mining Charter excludes a proper integration of the transformation of the sector's supply chain, one of the most important areas in which transformation could occur,” he asserts.

“Unlike the Construction Charter which includes all suppliers to the in-



Deon Oberholzer.

dustry, section 2.2 Procurement, Supplier and Enterprise Development, Mining Goods, of the Mining Charter prescribes that ‘a minimum of 21% of total mining goods procurement must be set aside for sourcing South African manufactured goods from black-owned companies’. The question procurement personnel should be asking, then, is: ‘Are these companies B-BBEE compliant?’ Without their compliance, economic inclusion is a one-layer deal.”

Another requirement of the Mining Charter is that “a minimum of 44% of total mining goods procurement spend must be set aside for sourcing South African manufactured goods from BEE-compliant manufacturing companies”.

Oberholzer says that while this should, in essence, have a positive impact on the local economy, there is no standard of measurement that indicates what precise percentage of goods must actually be manufactured in South Africa.

“Given that there is

no measurement standard defined, could a company import a product such as a tractor; paint it using South African-manufactured paint and add a few locally made parts to it, and then claim local content? After all, in the section on Verification of Local Content, the Charter merely asks that proof be provided in the form of certification from the South African Bureau of Standards (SABS) and that responsibility to verify this lies with the supplier.

“The wiggle-room here is enormous,” Oberholzer says. “If verification of local manufacture – and therefore, local job creation, materials and logistics - required suppliers to meet specific percentages, transformation could be sustained. As things stand now, the messages that manufacturers and others in the supply chain are getting are blurred and even unrealistic for many.”

As a transformation specialist, Oberholzer suggests that economic inclusion – the less scary way of talking RET – is vital to the country's economy and the best way to get ahead before new requirements are added is to ensure the highest level of B-BBEE compliance you can. “This means everyone required to comply should not be aiming for a Level 8.

A bare-minimum approach is not going to create jobs and ensure ongoing growth in any of our sectors,” he says, adding that in order to impact the broader economy and stay in business, a commitment to the B-BBEE Codes and a call for clear definitions and measurements is key.

“Radical economic transformation will come about when businesses employ radical solutions to job creation and skills upliftment; maximising their B-BBEE scorecard for better opportunities; and genuinely committing to an inclusive solution for the entire supply chain. Documents like the Mining Charter currently serve to highlight how much action still needs to be taken for true transformation to occur.

“But,” he concludes, “the starting point is clear and the days of fronting and minimal compliance with B-BBEE are over.”

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- Building and Construction
- Civil Engineering and Infrastructure
- Corrosion Control / Specialised Coatings
- Food / Beverage / Wine
- HVAC - Heating/ Ventilation/ Air Conditioning/ Refrigeration
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# Water facts Government doesn't want to know

AS Cape Town approaches the day the taps run dry, we should not allow the blame-shifters to mislead us. This is not a Cape Town crisis – it is a South African crisis. As scientists have been detailing for many years, our nation has serious water challenges requiring the continuous attention of our best brains if we are to have a future as a stable and economically viable country.

That is why we have a Department of Water and Sanitation, with a minister in the national Cabinet, and scientific institutions like the Council for Scientific and Industrial Research (CSIR). Provinces must do what they can with oversight, support, monitoring and disaster management powers, and municipalities are responsible for reticulation – but bulk water supply is the constitutional responsibility of the central government.

That said, let's go back a decade to 2008, when Dr Anthony Turton was due to deliver the keynote address at a CSIR conference. His topic was water challenges “that decision-makers need to know about”.

Dr Turton's text presented a hair-raising scientific analysis of the management of our water supplies and the implications of failure. In essence, he said “South Africa simply has no more surplus water and all future economic development (and thus social wellbeing) will be constrained by this one fundamental fact that few have as yet grasped.”

He identified the three fundamental drivers that have shaped our development to date and will shape our future. These drivers cannot be changed and if we fail to recognize them, he argues, all efforts to find solutions will come to naught:

- The weather, specifically our rainfall patterns.

Rainfall declines from east to west and to a lesser extent, from north to south, with a mean annual rainfall of 497 mm. In Africa below the equator, only Namibia and Botswana are drier. The global average is 860 mm. Dr Turton concluded that “water scarcity is a fundamental developmental constraint for the entire SADC region”. Taking into account water allocation, we have no surplus water.

A serious implication is that SA has lost the ability to dilute existing water, meaning increasingly expensive treatment of effluent streams and pollutants.

- South Africa's unique development pattern.

Whereas major cities in other parts of the world have developed on rivers, lakes or the sea, South Africa's major industrial, urban development is in Gauteng. The implications are twofold – firstly serious engineering and technology is required to get the water where it is needed; secondly the outflow from there is so degraded that it is unsuitable for human or industrial use. This means our economy as well as our stability are threatened.

- Our historical legacy.

South Africa was forged out of the extreme violence of the Second Anglo-Boer War, an episode so traumatic that it inspired the quest of Afrikaner Nationalists to restore their

nation from almost total destruction – not on the battlefield, but “by the gross injustice of the Scorched Earth Policy that targeted non-combatants”, together with the British concentration camps which resulted in the deaths of many thousands of Boer women and children, as well as of African detainees.

This event resulted in the formation of South Africa as a state, and it is an event saturated with social pathology. It was preceded by three other events of significant social trauma, all four of which combine to define the country we have become:

Firstly, the Great Cattle Killing of the amaXhosa after a century of war, which saw that great nation reduced after 1857 to “wage earners unable to sustain themselves”.

Secondly, the Mfecane of the 1820's and 1830's, an ethnic cleansing of non-Zulu tribes that laid the interior of the country waste and created “the vacuum into which the Trekboers moved during the Great Trek”.

And thirdly, the destruction of the amaZulu as the regional power at the Battle of Ulundi, following the British defeat at Isandlwana in 1879.

The combined effect of these four episodes, says Dr Turton, “has created a historic legacy that is based on violence and the disrespect of human rights that still lives with us today”. And whether we acknowledge it or not, our science is embedded in this legacy.

The same would be true for our economy, our culture, our politics, but Dr Turton concerns himself with science and his paper is addressed at decision-makers, whom he urges to consider our historic legacy. That legacy has three “vitally important” consequences, all still at work in our lives today:

- The propensity to resort to mass violence when the government fails to deliver and when expectations are frustrated.
- The propensity to resort to crude racial stereotypes – because our legacy has given us a country lacking in a coherent sense of nationhood. A manifestation of this is the majority of South African citizens living in endemic poverty, with little prospect of escaping from it without massive government support.
- The systematic erosion of investor confidence, fired by bouts of extreme violence such as xenophobic attacks that see victims burned alive. These are seriously damaging to perceptions of South Africa as a viable destination for foreign direct investment.

Like it or not, these are realities decision-makers have to take into account if we are to find solutions that work, he argues.

Turton quotes the Canadian scholar Thomas Homer-Dixon, who researched the phenomenon that some countries remain stuck in poverty while the rich countries become richer.

He found that, firstly, rich countries handle crises better because of their capacity to create solutions to complex problems. He called

it “Technical Ingenuity” – a nation's capacity to develop technical solutions to problems caused by unavoidable changes.

Secondly, a pre-condition is “Social Ingenuity” – a nation's capacity to create the institutional environment which will generate Technical Ingenuity.

Dr Turton shows how South Africa began developing Technical Ingenuity in 1910, slowly until 1966, when our capacity-building accelerated to surpass demand in the seventies. The trend continued strongly upward until 1985, when it started declining. In the nineties, our capacity for Technical Ingenuity dropped below what our country needed, and the gap has been worsening ever since.

The cause is a failure of Social Ingenuity, which we'll have to address “if we are to dig ourselves out of the hole we are sliding into”.

The “Uhuru Decade” – that period between the time when a new liberation government inherits a country with working infrastructure and the time when things start breaking down due to insufficient investment, maintenance and human skills – lasted longer than the usual ten years in South Africa, due to the particularly strong infrastructure that was in place here. The end to our Uhuru period came when Eskom's collapse as one of the world's most efficient energy providers was exposed with the electricity crisis of early 2008.

The remainder of our infrastructure is under similar pressure and, if nothing is done, “will collapse piece by piece, in the mid-term future”. Regarding our water supply, that prediction is supported by statistics showing an alarming decline in capital investment as well as in the remaining useful life of capital assets.

Dr Turton concludes by advocating a new role for the CSIR that would deepen our democracy by providing high quality science, presented in an accessible manner to the public, government and business. This knowledge may then be used in complex debates leading to another transformation in South Africa.

What South Africa needs as a matter of national urgency, said Dr Turton, are “complex debates that will slowly transform South Africa

## OPINION

### ON THE CONTRARY



Pieter Schoombee

ca from a non-accountable oligarchy into a fully accountable democracy in which every citizen can reach their full human potential, in a life based on dignity.”

That was a decade ago. As we see with the water crisis in Cape Town, we finally have a sense of local urgency, albeit belated. But that sorely needed national urgency is still glaringly absent. In the meantime the opportunity for “complex debates that will slowly transform South Africa” have come and gone. Now the water infrastructure is crumbling, the dams are silting up, sewage is running down the streets and the people are angry.

Part of the reason, indeed the main reason, is that Government, the ANC, is not willing or able to face the facts, much less do something about them – as with the electricity crisis.

Why do I say that? Simple. Dr Anthony Turton was prevented from delivering his keynote address at that conference on Real and Relevant Science. The ANC's political czars at the CSIR deftly removed him from the programme when they saw his written paper.

Do we have a different ANC now? Not if you look at the orchestrated chaos, violence and intimidation outside the (integrated) Hoërskool Overvaal. Will Cyril Ramaphosa do something about Gauteng education MEC Panyaza Lesufi and the ANC's other racist bullies? We shall see.

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## Pump attendants lose job protection in the US

WHEN South Africans travel to Britain and hire a car to get about, they cannot help but notice that when it comes to filling up with fuel that there is no one to operate the pump. They have to do it themselves – rain or shine, old or young, dressed for a day out in the country or putting on the style for a night at the opera, all types serve themselves.

Everyone is equal on a British service station forecourt. Not like here. We sit in our cars while others do the dirty work, inhale the fumes, check the oil and water levels, check the tires, carry the swipe machine, and bring the receipt to you in the comfort of your drivers' seat.

This is the price (or the benefit depending on how you look at it) our motorists pay for successive governments' decision to keep the oil industry regulated. Employing

pump attendants on South African service stations is compulsory.

There are good social reasons for this. It is estimated that some 250 000 people depend on the wages of our pump attendants. Were self-service to be allowed, it would mean another quarter million people dependent on social grants, joining the 16 million or so who are getting them already.

Does this regulation add to the cost of a litre of petrol or diesel bought at the pump? Probably it does, but only marginally. Only free market zealots would object strongly. Think of it as the cost of living, along with the rates and taxes we pay to keep an overmanned civil service in the manner to which they have been accustomed.

Of course, oil companies and service

Continued on P27

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