



Rextru Styling



5

Now into water?

Drones all at sea



12

From rescue to risk management.

15ml/day waste water system unveiled



23

Dignitaries in attendance.

Battery Park opens



BATTERY Park is a new urban park that forms the gateway to the V&A Waterfront. When it is completed in October 2018, it will integrate Cape Town's CBD and the V&A Waterfront through a series of pedestrian routes, including one alongside the canal. Visitors to the park will also be able to engage in a range of outdoor recreation, entertainment and retail activities in various levels of public spaces.

The 12,000 m² (approx. 1.2 hectare) park forms part of the V&A Waterfront's Canal District and can be accessed from either Dock Road, Fort Road, Ebenezer Road or Alfred Street. A four-story public parking facility is constructed beneath the park with entrances via Alfred Street or Dock Road. When it is complete the parking facility will offer 1206 bays for public, residential and tenant use.

The V&A Waterfront will be responsible for all security, cleaning and maintenance of the park.

Each area of the park contains public walking paths and benches. Landscaping consists of waterwise fynbos and other indigenous plants and trees. A combination of rainwater harvesting and greywater is used to maintain the plants.

Key elements

Amsterdam Battery

The site is of archaeological importance as it still contains the rear ramparts of the historical Amsterdam Battery, one of the oldest structures in Cape Town. Archaeological digs of the area were

undertaken prior to construction of the park, and they uncovered the two circular walls which have been retained.

- The Amsterdam Battery was constructed by the Dutch in 1784 on the site of an earlier fort (dating back to 1781) to defend Table Bay Harbour from attack, particularly from enemy ships.
- In 1827 the Battery was converted by the British to house prisoners from the Eastern Cape Frontier wars.
- The Battery was substantially remodelled by the British in 1882 and strengthened in 1879 with surplus material from the Breakwater quarry. In 1898 it was disbanded. It was partially demolished in 1905 to make way for the harbour and railway network extensions into the dock area.

To accentuate the look and feel of the old Battery, stone-filled gabion walls have been used throughout the park.

Canal

Battery Park will host a range of water sport activities from standup paddling to kayaking and swimming. The canal also provides a link between the V&A Waterfront and the Cape Town International Convention Centre through water taxis that ferry passengers between both points.

Piazza

The Piazza forms one of the levels of the park. It comprises of retail outlets, pedestrian paths, benches, gardens. Stairs leading down from the Piazza give visitors

access to the canal, from where they can watch water activities or simply meander along the water's edge.

Park

The elevated park area offers views across the V&A Waterfront and the surrounding city streets. The park is fully accessible to disabled visitors.

Youth activities and children's playground

This family friendly area will consist of a jungle gym, swings, rocking horses and a scooter path. It will also comprise of outdoor recreational activities for teenagers as well.

Retail

The Piazza is home to a niche companies offering specialist services as well as food and beverage retailers.

Events and activities

A pavillion similar to the Amphitheatre will offer some shelter from the wind and will host entertainment periodically. A few other things to do include:

- Find the perfect spot for a picnic.
- Grab friends and come spend the day stand-up paddling along the canal.
- Start your fitness run from here....grab a cup of coffee nearby.
- Grab a bike and cycle through the city.
- Enjoy an after work game of basketball on the court.

V&A Waterfront's vision for the park

David Green, V&A Waterfront CEO said: "A key objective of the V&A Waterfront has always been to re-establish the connection between the city and the sea, which we have achieved with the pedestrian path that runs alongside the Canal. Equally important, the ruins of the historic Amsterdam Battery have been retained in the Park as a new heritage site. A key focus of the development was also to offer views of the Waterfront and surrounding CBD, as well as retain and enhance the historically important line of sight between the Battery and the Noon Day gun site on Signal Hill. Our overarching vision though, was to provide a functional, convenient, comfortable, safe and unrestricted space with recreational activities for all age groups."

Let's celebrate!



THE Hytec Group has partnered with the Mandela Libraries Project for the fifth time to supply a fully stocked and containerised library for the Papong Primary School in the Limpopo Province.

Hytec's R290 000 donation covered a 12x3 m converted, insulated container with chairs, floor mats and posters and stocked with 2 500 books, 200 of which are early readers in the local languages of the province.

The ribbon-cutting ceremony was a strong community affair with the Head Master Mr Maroga of Papong Primary School, the school's governing body, and principals from four other local schools attending. "As the schools in the area are so rural, they rely on each other for assistance and support - even in celebrations", says Jackie Coutts, Director of Projects for Participate for Good NPC.

Mike Harrison, Hytec General Manager, commented: "Education is a key pillar for success in Africa and Hytec is extremely proud to sponsor this library. By investing in local communities and specifically children we create a better future and broaden the horizons of young minds far beyond the local community." He said that this container library means that local children are no longer just exposed to what they see locally - "now it can expand to what they read globally. It allows them to see the world in a more encouraging way."

Hytec has previously sponsored similar libraries for schools in Johannesburg, KwaZulu-Natal, Free State and North West, as part of the Mandela Libraries Project.

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Alaris: no shot in the dark for PSG

STELLENBOSCH-based investment house PSG Group has a knack for picking promising businesses. Anyone disputing this would have to look past the enormous success PSG enjoyed in helping nurture businesses like Capitec Bank and private education venture Curro Holdings.

However, at the periphery of PSG's investment portfolio – tucked away under subsidiary holding company PSG Alpha – lies a 27% stake in Alaris, a specialist communication group.

Alaris, although listed on the JSE, is not on the screens of mainstream investors...yet.

The group's mainstay antennas business designs, develops, manufactures and sells specialised broadband antennas as well as other related RF (radio frequency) products.

These products are used in communication, frequency spectrum monitoring, test and measurement, electronic warfare and other specialised markets.

Understandably, clients are located mainly outside South Africa,

and these clients are mostly system integrators, frequency spectrum regulators and players in the homeland security space.

Alaris' other key subsidiary is COJOT, which is located in the Espoo, Finland, and manufactures antenna products that aimed at the military and public safety markets globally.

Basically COJOT develops innovative broadband antennas to improve connectivity, coverage and competitiveness of radio equipment – which is deployed to save lives and protect property.

After some years of tinkering with operations, Alaris now appears to be gunning for above average profit growth. In the year to end June revenue from continuing operations increased by 17% to R187 million.

Profit after tax from continuing operations increased by 43% R33 million with net cash flow from operations more than tripling to almost R44 million.

The Alaris Antennas division has achieved a compound annual growth rate in profits of 19% over the past



four years.

Alaris CEO Jürgen Dresel said the company strove to understand its customer's needs and develop the best possible solutions. "This mindset together with adding innovative technological products to the portfolio ensures positive organic growth."

He said further opportunities for growth were achieved by adding agents and new system houses as clients.

Dresel stressed the company's competitive advantage was its ability to develop and hold its own IP (intellectual property) as it continued to invest sig-

nificantly in research and development.

It does seem a curious investment for PSG to back. PSG has in the past steered away from manufacturing/capital intensive industries, preferring to back low service-inclined businesses.

But a recent willingness to back specialised ventures like Energy Partners (power management and solutions) and GrahamTek (water solutions) suggests PSG will look at 'manufacturing' or 'engineering' businesses pitching into lucrative niches.

While still ranked as a 'significant minority shareholder', PSG

could come to the fore at Alaris if there is a concerted effort to grow the business both organically and by acquisition.

Dresel believed Alaris has significant potential for organic and acquisitive growth where there is a complementary opportunity in markets and products.

The group is already in the throes of clinching an acquisition of a US based company for \$2.75m (R40 million).

These appear to be exciting times for Alaris, and this is certainly a venture CBN intends keeping on its radar.

Profits still spinning

WESTERN CAPE-based casinos appear to be fending off the effects of tighter consumer spending patterns better than their counterparts elsewhere in the country.

Whether this feeds into provincial government's plans to allow one of the existing casino licences to re-locate to the Cape Town metropole – where Sun International's GrandWest property in Goodwood has enjoyed an extended period of exclusivity – remains to be seen.

Whereas casino operations in other parts of the country (especially the very competitive Gauteng market) have seen revenue lines strained and margins pressed, most Western Cape operations

appear vibrant and operating at lucrative margins.

Recent results from gaming giant Sun International showed GrandWest's income and EBITDA both increasing by 4% to R1.1 billion and R407 million respectively in the six months to end June.

Sun said the footfall to the complex was still maintaining an upward trend with strong play from the local Chinese market. The all-important EBITDA (earnings before interest, taxation, depreciation and amortisation) was a healthy 38%.

One probably needs to view GrandWest's ability to pull punters against the performance of Sun's other large Cape Town asset, the Table Bay Hotel,

which was impacted by the water crisis that resulted in a number of cancellations. The room occupancy at the Table Bay decreased by 11% to 68% - but there was some good news in the average room rate improving by 6% to R3070.

The smaller Golden Valley casino in Worcester generated revenues of R84 million and R8m in operating profit. EBITDA was R16m, meaning a low margin of under 20%.

What Sun could really celebrate, however, was the performance of its SunSlots operations – the old GrandSlots business which comprises mainly limited payout machines (LPMs). SunSlots – which has large market share in the West-

ern Cape – reported a sprightly 12% hike in revenue to R562m and a 14% jump in operating profits to R80m.

Sun's larger rival Tsogo Sun reported mostly encouraging results from its three Western Cape casinos in the year to end March.

Tsogo disclosed a 5% increase in the win rate from its Western Cape casinos to R529 million.

The star performer was the small Mykonos casino, which reported a 12.4% jump in revenue to R183 million and a 19% increase in EBITDA to R86 million. This West Coast-based casino operates on a margin of 47%, which is unrivalled in the local casino sector.

The Caledon ca-

sino endured leaner times with just a 1% increase in revenue to R177 million and just R49 million posted at EBOTDA level – representing a modest margin of 28%.

The Garden Route casino outside Mossel Bay increased revenues 4.5% to R235 million and a 2.4% nudge-up in EBITDA to R99m.

This represented a very respectable margin of 42% - ranking the Garden Route casino as one of the most profitable gaming properties in South Africa.

On these performance measures it would seem safe to assume that the less profitable Caledon and Worcester casinos would be the candidates to have their licences transferred to



the Cape Town metropole by Tsogo and Sun respectively.

The time frame on the mooted licence transfer is still unclear with most gaming sector sources predicting a handful of years will pass before a second Cape Town casino is in operation.

Officially, the Western Cape government gazetted draft legislation on February 28

this year to establish three zones for casinos in the Cape Metropole.

At this point – a low mark in the cycle of consumer spending and a period of political uncertainty – there might not be too much enthusiasm from both Sun and Tsogo to spend the enormous capital required to develop a casino and entertainment precinct in Cape Town.

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SOLVING SEEMINGLY UNSOLVABLE CLEANING PROBLEMS

Handsome profit catches

THE latest financial results from the Cape's biggest hake fishing enterprises, I&J and Sea Harvest – offer some valuable insights into a specialist sector that is looking particularly robust.

Perhaps the most heartening outcome was the line in I&J's report to investors for the year to end June – which stated that there were "early signs of increasing size mix evident, supporting higher catch rates". This was supported by a similar utterance by Sea Har-

vest, which also noted "catches have started to tick up".

I&J disclosed that 'hake tons per sea day' had increased to 9 tons for financial 2018 – arresting a downward trend that started in 2012 and reached as low as 8.1 tons last year (when a unprotected strike hampered volumes).

Overall I&J reported that revenue increased by 5,3% to almost R2.5 billion.

The company said revenue growth stemmed from higher

sales volumes and higher selling prices in domestic and export markets – albeit partially offset by lower Rand exchange rates achieved on export sales in line with the strengthening of the Rand.

Sales volumes increased despite lower quota – thanks mainly to improved fishing in the second half and higher volumes of non-hake products.

Operating profit was up almost 6% to R705 million with a focus on cost-savings initiatives paying off.

Sea Harvest – reporting results for the six months to end June – posted a 5% gain in revenue to just over R1 billion after being impacted by the reduction in the total allowable catch (TAC) in South Africa and the delayed start to the prawn fishing season in Australia. Gross profit increased by 4% to R368 million.

Sea Harvest reported that its gross profit margin improved by 3% to 36.6% after benefitting from further efficiency gains across both the fleet and factory operations and an increase in higher margin export sales volumes. Headline earnings of R111 million improved marginally on the corresponding six months in 2017 – but the bottom line figure was also impacted by upfront costs incurred for the recent acquisition of Viking Fishing (as reported previously in CBN).

On a comparative basis, there are some interesting statistics to weigh up. I&J reported its profit margin increasing from 16,5% to 17,1%, while Sea Harvest saw a more pronounced fattening of its margin from 18% to 23%.

Around 46% of Sea Harvest's hake production was exported with the export volumes growing 3% on a zero increase in selling

prices. This meant Sea Harvest's export revenue was up just 3% for the interim period.

On the other hand, I&J reported a drop in export revenue of 8% with volumes down 0.1% and average selling prices coming down over 5%.

Sea Harvest's local market volumes dropped 7% (understandable since the TAC reduction) – but selling prices were hiked 6%, which limited the decline in revenue to just 1%.

By contrast, I&J saw local market revenue growth of almost 10% with volumes growing just 1.5% but selling prices increasing 8%.

I&J listed its local market shares at 55% (previously 48,5%) with Sea Harvest estimated their market share at 38% (although this figure could soon be markedly boosted with the incorporation of Viking Fishing's hake operations).

Both Sea Harvest and I&J are gazing at the longer term horizon optimistically.

While I&J conceded its prospects remained



heavily dependent on fishing performance and exchange rates, the year ahead looks promising.

The company noted that - excluding the impact of weather conditions - catch rates had improved in the last few months and, if sustained, should result in good sales volumes to well-priced export markets. I&J added: "Export exchange rates secured for the year are at levels that support sound profitability and the more recent Rand weakness provides upside potential."

Sea Harvest looks likely to capitalise on further efficiencies as well the fair fishing conditions.

The company indi-

cated that the R250 million conversion of Harvest Mzansi to a hake freezer trawler was completed on time and within budget. In addition, Sea Harvest said the R100 million installation of the Marel Factory Solution was on track for delivery in this quarter.

Sea Harvest CEO Felix Ratheb said the company's key focus for the six month trading period was continuing to drive its strategic deliverables of organic and acquisitive growth. "The Harvest Mzansi joined our fleet in April 2018, and our factory optimisation project concludes in the fourth quarter of this year. These initiatives should assist us in delivering margin enhancement."

Cheese flavoured hake?

SEA HARVEST looks set to broaden its brands, backing away from its traditional seafood fare with a proposed R527 million acquisition of Western Cape-based Ladismith Cheese Company (LCC).

Sea Harvest CEO Felix Ratheb stressed LCC was a profitable, branded fast moving consumer goods food manufacturer of significant scale in the food and agricultural sector. "It has a long track record, strong

national brand and a proven management team."

He argued that the dairy sector was expected to experience continued growing demand for cheese and butter in response to consumer dietary changes towards natural fat products.

The acquisition has prompted Sea Harvest to form a new subsidiary, Cape Harvest, which suggests further non-seafood aligned acquisitions might be on the menu.

LCC – which plies the wholesale, retail and foodservice categories with mainly butter and cheese – generated revenue of R681 million and after tax profits of R58 million in the year to end January this year.

Dairy has been a notoriously fickle sector over the last two decades, and it will be interesting to see if Sea Harvest can scale up the profitability of the LCC operations in the years ahead.

ISP / Facebook to expand African connectivity

CURRENTLY, 42% of countries in Africa lack IXPs, which means that most of their domestic Internet traffic is exchanged through points outside their respective country.

The Internet Society a global non-profit organization dedicated to the open development, evolution and use of the Internet, has announced that it is partnering with Facebook to develop Internet Exchange Points (IXP) throughout Africa.

An Internet Exchange Point is where multiple local and international networks, ISPs and content providers interconnect their networks

together to efficiently exchange Internet traffic through an arrangement commonly referred to as Peering.

Currently, 42% of countries in Africa lack IXPs, which means that most of their domestic Internet traffic is exchanged through points outside their respective country, usually through satellite or submarine fibre across multiple international hubs to reach their destination. This can result in poor end-user experiences and discourages hosting content locally, which are some of the key factors towards the development of the local Internet ecosystem.

Peering at IXPs helps keep domestic Internet traffic local by offloading traffic from relatively expensive international links onto more affordable local links. As a result, ISPs are able to offer improved Internet experiences for end-users and spur interest in hosting content locally.

The Internet Society and Facebook will collaborate in promoting IXP infrastructure development, training and community engagement with the objective of increasing the number of IXPs and supporting the expansion of existing IXPs to meet the growing demand in Africa. Studies have

shown that Internet users throughout Africa benefit from Peering as it enables faster, more affordable and reliable access to content.

"The Internet community adopted the goal of having at least 80% of the Internet traffic consumed in Africa being locally accessible, and only 20% sourced outside the continent by the year 2020," explains Dawit Bekele, Africa Regional Bureau Director for the Internet Society.

"We are getting closer to that target thanks to the many activities that promote interconnection and hosting in Africa and to partnerships such as this one with Facebook."

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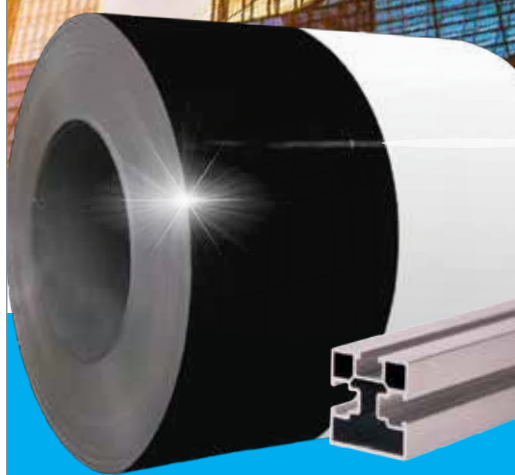
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Top BBEE rating for Zest WEG

THE Zest WEG Group recently achieved Level 1 status in terms of Broad-based Black Economic Empowerment (BBEE) ratings.

A subsidiary of the Brazil-based multinational WEG, the Zest WEG Group is over 51.6% black-owned, including a 32.1% stake by black women, and was ranked as Level 2 last year.

“Our real success here has been to in-grain our commitment to South Africa and to transformation in the everyday activities and culture of the business,” says Zest WEG Group chief executive officer Louis Meiring. “Our empowerment journey is not an annual tick-box exercise, but rather is driven by every staff member working to build local capacity, people and excellence.”

He emphasises that the business model has evolved to engage all employees in maintaining the group’s focus on quality and transformation.

Reaching this pin-

nacle BBEE rating has been the culmination of various efforts, according to Zest WEG Group operations director Juliano Vargas, and is just one indication of the investment that the group is making in the country’s economy and society.

“We continue to invest in local manufacturing and are improving our facilities to achieve high levels of quality and productivity,” says Vargas. “This also means developing the skills necessary and increasing our knowledge base in the latest technologies related to our production requirements.”

From its position as an ISO 9001-listed business, Zest WEG Group was recently one of the first to upgrade to ISO 9001-2015, making it one of only 112 companies out of 2 200 South African firms with ISO 9001 certification to reach this next level. The group has also recently invested heavily in its Heidelberg transformer manufacturing



Louis Meiring, Zest WEG Group CEO, and Juliano Saldanha Vargas, group logistics and operations director at Zest WEG Group with the Level 1 BBEE rating certificate.

plant, where it operates one of the country’s leading test laboratories for transformers.

“We are also moving strongly into the renew-

able energy space, and this will support government efforts to develop this sector of the economy – as outlined in its recent Integrated

Resource Plan,” says Vargas. “Our product expansion includes items like steam turbines, wind turbines and solar panels.”

The focus on continuous improvement has been necessarily accompanied by developing its skills base in industrial manufacturing and engineering, well beyond the legal requirements of BBEE.

“When it comes to skills development, we invest at least double the percentage required by the Codes of Good Practice, and this includes creating skill-sets for our business that currently do not exist in the local marketplace,” he says.

He highlights that leading technology from WEG’s plants in Brazil is also being shared with South African operations, whose facilities will benefit considerably from the skills transfer; this will allow the local engineering operations to become more independent in terms of knowledge and skills.

Knock on wood

EPPING-based wood panel manufacturer KayDav is back in the black for the six months to end June after slipping into a loss situation in the corresponding interim period in 2017.

The company makes its panels by compress-

ing wood waste into solid panels, and these are used in the construction, furniture manufacturing and shop fitting industries.

CEO Gary Davidson said the improved performance was driven by a reduction in the bad debt expense of R8 million with operating expenses held at similar

levels to last year.

Despite tough trading conditions, KayDav was able to grow revenue by 7% to R465 million and gross profit by 3% to R124 million.

Davidson stressed management would continue to work on improving gross profit margins.

Although trading conditions have tightened (especially in the construction sector), KayDav’s capital structure remains reassuring with the debt-to-equity ratio (or gearing) dropping to 21% compared with 23% previously.

Davidson explained that the slightly higher net overdraft position of R35 million was the result of paying a large supplier earlier than its normal trading terms in return for additional settlement discount.

Looking ahead, Davidson reminded that the wood-based panel industry was a seasonal business with the majority of revenue and profits generated during the second half of the year.

But he cautioned that while the normal seasonal upswing would occur as usual, low business confidence levels and consumer caution would continue to constrain year-on-year growth.

“While it is unclear when the general econ-

omy will improve, with the benefits it will bring to KayDav, management will continue to deal with factors within its control including improvement of our service and product offering to customers, containment of costs and strong working capital management.”

KayDav’s recent thrust into the specialist packaging industry also appears to be going fairly smoothly.

Davidson pointed out that strong revenue and profit growth occurred at the Johannesburg-based packaging operations. “We expect the strong growth to continue.”

But he indicated that the Cape Town-based packaging operations experienced tougher trading conditions with the drought affecting agricultural output. “When agricultural production and general economic activity in the Western Cape return to pre-drought levels, profitable growth will return.”



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Rextru styling

MOST fashion retailers are straining at the seams as consumer discretionary spending diminishes – but Salt River-based Rex Trueform has styled an elegant profit turnaround in the year to end June. Revenue - mainly driven by its Queenspark fashion chain - increased by 11% to R609 million with gross lifting 10% to R320 million.

Older readers may remember Queenspark was started as a factory shop sideline in the eighties when Rextru's main business was still clothing manufacturing (an enterprise that has long since ceased). The chain has been conservatively managed in terms of expansion – but in good years the business has proved very profitable.

The latest Rextru results showed there was also a clear commitment to sewing up costs with Rextru reporting that the increase in expenses was contained to a commendable 5%.

The focus on costs meant Rextru was able to hike operating profits massively from under R1 million in 2017 to a more substantial R14 million.

Rextru CEO Catherine Radowsky said the Queenspark strategy included the introduction of new brands to complement the existing ranges.

She noted a number of new brands, together with new product categories, were introduced during the financial year in an effort to provide an improved offering to customers.

“This new strategy, although in its infancy, is progressing well.”

Radowsky disclosed that Queenspark opened ten new stores and closed one store during the financial year - bringing its total number of stores to 70 (excluding one franchise store in Kenya and two online sales platforms).

Rextru indicated that the retail segment turnover increased by 11% to R588 million – but the gross margin dropped marginally to 54.4% partly due to more aggressive mark-downs.

Still the Queenspark segment managed a smarter operating profit of R8.2 million compared with a loss of R1.9 million in 2017.

Looking ahead, Radowsky said Queenspark was making progress on its strategic initiatives to build new channels of growth and increase brand awareness.

She said the intro-



to reap the rewards of enhanced customer knowledge and understanding.”

Radowsky said the introduction of lay-by as a form of payment has been well received and continued to gain traction. She said Queenspark would continue to open new stores with a view to expanding the chain's footprint both in South Africa and Namibia.

Radowsky said the first seven weeks of trading in the new financial year had exceeded management's expectations. “Whilst we are fully aware that we are trading in difficult economic times, we remain confident in our future and in our ability to deliver sustainable growth...”

duction of third party brands had been well received by customers and new house brands continued to grow.

“Customer relationship management has been, and continues to be, a major focus, and we are beginning

Rextru makes a splash

AT the time of going to press Rex Trueform announced proposals to acquire a 33.78% stake in SA Water Works (SAWW) in a funding deal worth R81m.

SAWW's main interest is a controlling stake in Sembcorp Siza Water, which manages a water concession business for residential, commercial and industrial clients.

Rextru said it had been looking for opportunities to diversify away from its core clothing retail business that operates under the Queenspark brand. “The acquisition of the stake in SAWW will allow us commence the process of diversification.”

Rextru – which also owns valuable properties in Salt River - sits with free cash of close to R70m.

Rextru is controlled by a consortium headed by well-known Cape Town businessman Marcel Golding, a former trade union stalwart that become an empowerment pioneer as a co-founder of Hosken Consolidated Investments (HCI).

Golding has previously shown an inclination for operations specialising in water services.

Enrol in learnership programmes

IN response to increasing unemployment rates in South Africa, Engen are running various campaigns to recruit candidates for learnerships, which are based on business and industry needs.

To date, Engen has trained over 500 artisans and professional drivers, who are now licensed to trade in various fields.

Engen invites interested people to email their CV's to Learnerships@engenoil.com and to check for available learnership opportunities on the company web site. (www.engen.co.za).

South Africa has an unemployment rate of approximately 27%, yet at the same time, the country has a shortage of suitably qualified people. In an effort to help address this anomaly, Engen offers a variety of learnerships in technical fields to help educate and upskill school leavers and unemployed youth.

A learnership is a work-based learning programme where classroom studies at a college or training centre are combined with practical on-the-job experience. Research shows that we learn far better, when we practice what we have been taught in the classroom in a real workplace environment.

Engen aligns its learnership recruitment

to its business needs. Those who complete their learnerships are often employed by the company or within the broader petroleum industry.

“In this way, the introduction of learnerships is making a good contribution towards solving the skills shortage in the industry,” says Mmalenyalo Galane, Skills Development Facilitator at Engen.

“By physically performing tasks in the workplace that are learned in the classroom, you can put into action what you have learned and also what you did not understand. This allows you to ask the trainer to explain that part of the lesson again until you fully understand it.”

Galane says the learnerships offered by Engen form part of a nationally recognised qualification and are directly linked to an occupation.

“A learnership does not only teach skills for a particular job when you complete your training, it also forms part of a higher qualification towards which you can study by undertaking other learnerships or short courses.”

Adds Galane: “Each learnership has a specific level of qualification. For example, if you want to become an artisan, you must complete four separate

learnerships (levels 1, 2, 3 & 4). There is no set period to do this, as each level counts towards the full qualification.”

Engen offers learnerships in Chemical Operations, Professional Driving, and Production Technology, as well as various trade occupation apprenticeships such as diesel mechanic, fitter and turner, instruments and electrical.

The 12-month learnerships offered by Engen pays a monthly stipend to successful candidates.

Engen is also passionate about the development of people with disabilities, says Engen's head of Human Resources, Chwayita Mareka, and has partnered with an N.P.O. in Cape Town for learnerships specifically designed for people with disabilities.

In addition to the learnership programme, Engen also funds bursaries for students studying Engineering and Finance-related degrees, with the aim of creating a pipeline of talent for the Engen Graduate Development Programme.

“In all these ways, Engen is surely doing its part in helping reduce the country's high unemployment rate by developing the unemployed Youth and further upskilling them on the job,” says Mareka.

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'Miracle' cleaner handles just about any clean-up

ORLICHEM's Wipe Out is its bestselling water based non-caustic degreaser that is SANS1828 Food approved, is non-flammable, non-toxic, non-corrosive and bio-degrades within 28 days.

This 'miracle' product can be used on any surface – painted or unpainted, all metals and alloys, concrete, glass, ceramics and even textiles, either diluted in recommended ratios or used neat in stubborn situations.

Its special formulation enables it to break down oil, grease, wax, bitumen, animal fats, inks & blood.

All types of mineral, synthetic & food based oils can be treated including crude oil, hydraulic oil, engine oil, sunflower, canola, olive oil, vegetable, coconut and palm oils with various ratios of dilution with water.

For the printing and packaging industries, Wipe Out dissolves all water and oil based inks.

Wipe Out dissolves grease completely within two minutes and thick grease when used neat or with equal parts of water.

Animal fats and starch have been successfully treated where Wipe Out will loosen fat and slowly convert it into a soap which is then easily moveable.

Products as diverse as bitumen and blood



Heavily contaminated floor treated with Wipe Out.

have successfully been treated with Wipe Out. It can be supplied with a citrus fragrance and heated to 60°C for more extreme cleaning situations.

Food & beverage industries:

The product has proved superior to solvents and paraffin when cleaning food oils and is used extensively for surface and machinery cleaning in food processing and bottling, brewing and wine making, abattoirs and retail shops for general purpose cleaning.

Industrial:

The product has a proven track record in cleaning grease, water and oil based inks, hydraulic oils and general clean-up duties on concrete and steel floors.

Vehicles:

In the automotive industry it is used on painted surfaces, aluminium and galvanized plates. Besides oil spills, Wipe Out is the

preferred choice cleaner for removing mineral and vegetable oils from road tankers, for general truck cleaning and steel, rubber and plastic bins and containers.

Marine:

Wipe Out is used extensively in the marine environment as it can be diluted with seawater and is eco-friendly and bio-degradable. Applications include off-shore rig cleaning, all on-board ship cleaning and degreasing, in the fishing industry in fact any marine application where oil or bitumen contaminants need to be removed.

Mining & agriculture:

Orlichem have received many testimonials bearing out the effectiveness of Wipe Out where it has been used to clean up crude oil, grease and wax from machinery, heavy duty trucks, mining equipment – including conveyors – both on painted and unpainted surfaces.

Domestic:

A major holiday resort uses the product to clean tiled surfaces in kitchens and bathrooms as well as carpets, to remove oils, grease & fats from these surfaces. Wipe Out has been used to soak overalls and heavily stained clothing where it is heated in diluted form to 60°C and garments are allowed to soak for a period of time.

Testimonials

Many of Orlichem's clients have run independent tests comparing the performance of Wipe Out with traditional cleaners and solvents:

"Wipe Out replaces white spirits to dissolve grease and is 97% as effective as white spirits as a cleaning agent."

"Wipe Out vs Paraffin – Wipe Out outperforms paraffin when cleaning food based oil."

"Wipe Out vs Paraffin(2) – Wipe Out has equal cleaning power to paraffin when cleaning up crude & hydraulic oil spills. Wipe Out does have a delayed reaction to the surface, needing 30 seconds to break the bonds of the oil. Wipe Out can be left for up to 15 minutes before rinsing."

To see Wipe Out in action, view the YouTube video at <https://www.youtube.com/watch?v=v81YUC5MFqE>

SEW clinches major order for West African mine

SEW-EURODRIVE South Africa has clinched a major order for five M-Series industrial gear units for a mining operation in West Africa.

Its Projects Department, headed up by Andreas Meid, with Pat Marquez as Project Sales Coordinator and Brett Weinmann in charge of Project Sales Development, oversaw this entire project from receipt of the initial order to successful installation and commissioning at the mine, in addition to any back-up service and technical assistance required.

It is this capability to offer complete solutions packages, as opposed to standalone products, in addition to the necessary after-market support, that has resulted in SEW's Projects Department showing consistent growth year-on-year.

The Projects Department also has a drawing office, and a mechanical engineer to compile any calculations that are needed. Its core function is to respond to queries from either project houses or OEMs for specific project work. It focuses mainly on Greenfield projects related to conveyors, agitators, and mixers in mineral-processing applications.

"Based on the enquiries received, we work in conjunction with the specific pro-



The M-Series industrial gear units are ideal to meet the highest demands for quality, reliability, and performance.

ject house or OEM to offer a complete solution for their mining clients. In other words, our products essentially allow them to complete their portion of the work in hand," Meid explains. Such collaboration between suppliers and related companies is a growing trend in response to a tough business environment, and clients' need to reduce costs by installing the latest technology.

"We specialise in integrated solutions. A lot of clients tend to regard SEW solely as a gear unit supplier, but we offer a host of ancillary services that can add significant value, reduce risk and downtime, and improve efficiency." It is for this reason that the Projects Department remains in a growth phase, with the bulk of SEW's project work being secured in the rest of Africa at present.

In this regard, it also

works closely with the Exports Department, headed up by Marcio Sicchiero, to realise additional opportunities on the continent.

In terms of main products, the M-Series industrial gear units (with the 'M' indicating 'modular') are ideal to meet the highest demands for quality, reliability, and performance. The product range has been optimised for a range of drive characteristics, allowing for simple machine design by easily adding options and mounting parts.

A long service life is guaranteed due to highly efficient lubrication and sealing, which also cuts down on maintenance requirements. Easy mounting and installation are facilitated by advanced features such as EBD (Extended Bearing Distance) and an axial thrust bearing arrangement on the output shaft.

A GROUND BREAKING APPROACH TO PROPERTY

Abcon Group

MainOne Cable System extended

THE SubCom company has announced that it has secured a contract from connectivity and data centre solutions provider, MainOne to extend its active submarine cable system into West Africa's francophone region with two additional branches connecting Senegal (Dakar) and Cote D'Ivoire (Abidjan). These new branches will connect to MainOne's 7 000km cable systems, which extends from Portugal to Nigeria, and will inject new technology that upgrades the system to a potential capacity of 10TBps by November 2019 when the subsea system becomes operational. With this development, MainOne will have landing points in five markets – Nigeria, Ghana, Senegal, Cote D'Ivoire and Portugal, in addition to Cameroon. A cluster of francophone countries in West Africa are experiencing an increased demand for advanced telecom services

Shambles in Malmesbury?

IT has been reported that at least half the 180 or so exhibitors of the Agri Mega Week Expo held recently in Moreson Mega Park in Malmesbury have complained to the organisers, Mega Events, part of MGC Holdings (Pty) Ltd, about the poor turnout of visitors. Accusations of insufficient marketing to publicize the event have been levelled at the organisers. Angry participants were in an altercation with the organiser's staff and the MD of MGC Holdings, Orton King at the event.

Many of the exhibi-

tors, especially those in the 'yellow metal' industry had spent many hundreds of thousands of Rands in attending and some had flown in overseas principles at great expense and had suffered corporate embarrassment as well as financial loss.

In a written statement to disgruntled participants King explained that his company had also suffered losses due to poor visitor turnout and that he was undertaking a review of why there had been so little interest in the Malmesbury event. This explanation he said would be

forwarded to all participants.

It would appear that the Agri Mega Week Expo had been a regular yearly event on the agricultural calendar in the Western Cape, when it was held in Bredasdorp. It seems that Mega Events lost the mandate to hold the event there this year and the venue naming rights, and moved it to the new venue of Moreson Mega Park in Malmesbury. Why this happened is unclear but according to Orton King, this was done "at the request of exhibitors" but doesn't explain why they lost the mandate.

The Bredasdorp event however did take place at the same time as King's Agri Mega Week in Malmesbury, but this time under the sponsorship of NAMPO and Grain SA. Contact with this organisation for comment hasn't met with a response.
Ed.



Earn CPD points with WearCheck training

WHEN you complete Mobius reliability solutions training courses at WearCheck, you can now earn CPD (continuing professional development) points – this was recently approved by the South African Institute for Mechanical Engineers (SAIMEchE).

The Engineering Council of South Africa (ECSA), in agreement with international engineering bodies, stipulates that South African engineering professionals must undertake CPD activities to keep abreast of expert knowledge, to demonstrate competence and to renew professional registration.

WearCheck has always placed value on ongoing skills training and knowledge development, and the company has presented several levels of oil analysis training for many years. In 2015 WearCheck became an

accredited training partner for the internationally-acclaimed Mobius Institute, and began offering condition monitoring courses.

WearCheck's Mobius trainer Dennis Swanepoel, who was among the first on the continent to complete his Vibration ISO CAT IV certification, is a qualified mechanical technician and has more than 20 years' experience in the reliability improvement field.

Says Swanepoel, 'The SAIMEchE approval for CPD points is an excellent endorsement of our courses. Their ratings will be revised in 2021. They are currently validating the three-day Asset Reliability Practitioner ISO CAT course for CPD points, too.'

'For a plant to operate at maximum reliability, it takes competent and well-trained technicians who apply their

world class knowledge and skills. WearCheck's training courses can enhance staff competency to boost the bottom line of the business.

Mobius training is internationally acclaimed as the standard for reliability solutions technicians, and the courses are run by WearCheck on demand. Costs include the examination fee for CAT I and II, and are as follows:

- One day on-site condition monitoring overview: R15 000.00 (RSA only)
- Four day non-certified basic: R10 000.00 preparation for CAT I (including RSA)
- Five day CAT I: R15 000.00
- Five day CAT II: R16 450.00 (Prices exclude VAT and are valid until the



WearCheck's Mobius trainer Dennis Swanepoel.

end of 2018.) The condition monitoring overview courses do not include training material, and a minimum of six candidates is required for all training courses. There may be an additional charge for the lecturer's accommodation and travel.

To book a Mobius training course, please contact Christene on christenef@wearcheck.co.za or call WearCheck Johannesburg on (011) 392-6322.

The SAIMEchE has approved the following WearCheck courses for CPD points:

Course	Duration	CPD Credits
Introduction to Vibration	1 Day	1
Precision Balancing	2 Days	2
Vibration Analysis ISO CAT I	4 Days, incl Exam	3
Vibration Analysis ISO CAT II	5 Days, incl Exam	4
Vibration Analysis ISO CAT III	5 Days, incl Exam	4

Helping Hand for Building Entrepreneurs

ABSA is changing perceptions of the way we think about financial institutions, particularly when it comes to entrepreneur development. Its Shared Growth Strategy is designed to assist emerging small and medium enterprises (SMEs) in South Africa to grow and prosper through various Enterprise Development (ED) initiatives, while adding to shareholder value. These initiatives contribute to the wider national agenda to promote a thriving SME sector that enables economic and social development in the country.

Absa has ring-fenced funds for development finance, with funds being advanced under an Enterprise Development Programme. Access to Non-Financial support is regarded as crucial as of the 80% of SMME's which fail within the first year – 67% fail due to ineffective management and positioning.

There are ten ABSA Entrepreneurship Centres around the country, located in all the major business centres which provide the following interventions:

- Entrepreneurial mind-set development
- Identification of problems and the development of creative solutions to overcome these
- Validation of business ideas
- Development of a viable business concept

Entrepreneurs are empowered with:

- Basic entrepreneurial acumen
- Business tools to develop business understanding
- Financial and business models
- Resources for success
- Pitching skills and a pitch deck

An example of an enterprise development initiative facilitated by Absa's Western Cape enterprise development team is Rise, a fintech innovation hub in Cape Town. The

intention for Rise is to lower the barrier to growth for women entrepreneurs by supporting them with access to a space and community that can help fast-track their personal and professional ambitions via mentorship, access to markets, and access to learning and skills development opportunities. The ultimate objective is to support the power of small businesses and is a perfect example of co-creation for shared growth.

In June this year Rise selected five black women in technology entrepreneurs to participate in an entrepreneurship assistance programme, hosted at the Cape Town facility. The technology sector is an area that requires support in terms of driving diversity and inclusion. The purpose of the initiative is to lower the barrier to growth for women entrepreneurs by supporting them with access to a space and community that can help fast-track their personal and professional ambitions through mentorship, access to markets, and access to learning and skills development opportunities.

The women entrepreneurs were specifically selected for the important role they play in driving economic growth – research has found that women in developing countries are largely prevented from harnessing their full potential due to a lack of funding, regulatory restrictions, lack of training and socio-cultural restrictions. The participating start-ups were selected based on a number of criteria. They had to be early- or seed-stage entrepreneurs with novel and potentially disruptive patented technology. The affordability of their solutions and value to their respective communities were aspects that were also considered. So too were the expected development and growth potential of test products, current clients and business traction.

The chosen entrepreneurs went on an intensive, 12-week boot camp that culminated in a funding pitch to potential investors at Rise.

Following intensive coaching during the boot camp, the five selected founders had an opportunity to attend monthly networking events with tech experts and investors to ensure they were pitch ready.

The following five entrepreneurs were selected to participate:

- **Lily Brinjal**, founded by Miriam Vallie, is an online store boasting beautiful, locally-produced items by tapping into Cape Town's creative pool of talent. Vallie provides a platform for the public to access these local products.
- **Boudoir Box** is an online store focused on sourcing locally-produced, luxury, and designer lingerie for the plus-size market. Founded by Tarryn Cardre Abrahams, this unique e-commerce store includes a subscription pamper box.
- **SintuOnline**, founded by Mpho Kate Sekwele, aims to promote African heritage to a global customer base by providing a platform for African designers and craftspeople to showcase their products. Sekwele focuses primarily on women and, through the site, aims to assist them to scale their businesses.
- **Rydwith Holdings Security Tech** provides a quick response for people to get out of danger. Founder, Santana Iya, has developed a wearable panic button that allows the user to share their location coordinates to local police, private security and loved ones.
- **Zedek Fibre Telecomms** is a unique fibre infrastructure provider committed to enabling internet connectivity for all. Catering for both homes and businesses, founder Lizzy Katlego Mabena has a strong focus on schools, hospitals and hard-to-reach communities.



David Cameron to speak in JHB

DISCOVERY have announced that former Prime Minister of the United Kingdom David Cameron will be part of the international speaker line-up at the Discovery Leadership

Summit in November this year. The ninth Discovery Leadership Summit will take place on 1 November 2018.

This iconic event is designed as a global platform that brings

together local and international thought leaders and inspirational visionaries who are shaping leadership conversations today. The summit facilitates the sharing of thought-

provoking intellectual capital for better leadership in business, government and civil society.

"We are honoured to host a panel of eminent speakers, includ-

ing David Cameron, at this year's Discovery Leadership Summit. We look forward to learning from his views on global politics and leadership, and from all our speakers as a whole," said Adrian Gore, Discovery Group Chief Executive. "The potential of excellent leadership to uplift humanity remains top of mind in every society. At Discovery, we value every opportunity to encourage dialogue on this exciting front. It is our hope that this year's Summit will contribute to building a stronger South Africa and global society as a whole."

This year's distinguished speaker line-up also includes:

- Lord Jim O'Neill, a celebrated British economist, author and former chairman of Goldman Sachs Asset Management. He serves as a visiting research fellow at Bruegel, a European think tank for international economics, and is one of the founding trustees and president of SHINE, a UK-based educational

charity. In 2011, he was included in The 50 Most Influential ranking by Bloomberg Markets.

- Prof Clayton Christenson, an American academic and business consultant who currently serves as the Kim B. Clark Professor of Business Administration at the Harvard Business School of Harvard University. Founder of the non-profit, non-partisan think tank, Clayton Christensen Institute, he is regarded as one of the world's top experts on innovation and growth. He is also an established entrepreneur, having started successful enterprises, including CPS Technologies; innovation consulting firm, Innosight; and investment firm, Rose Park Advisors.
- Efosa Ojomo, an alumnus of the prestigious Harvard Business School and a research fellow at the Forum for Growth and Innovation at the Clayton Christensen Institute, a non-profit,

non-partisan think tank dedicated to improving the world through disruptive innovation.

- Caroline Webb, a management consultant, economist and renowned leadership coach. She has worked alongside organisations across the globe to assist their employees in increasing productivity, energy and success – first as a partner at McKinsey & Company, where she continues to serve as a senior advisor, and now as CEO of her own firm, Sevenshift.

More local and international speakers will be added to this line-up and will be announced in the near future.

The one-day event includes local and international speakers and panel discussions, and will run from 08:30 to 17:00.

Tickets for the Summit can be purchased at www.discoveryleadershipsummit2018.co.za

More information is available at www.discoveryleadershipsummit2018.co.za



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- **Agri Producers & Processors Village**
This is a new and dedicated exhibition area for commercial farmers, farming co-operatives, producers and exporters
- **Investment Discovery Sessions (IDS)**
The African Agri Council is once again pleased to host our successful IDS – a platform for agri projects looking for investment

www.agri-indaba.com African Agri Council

Community Leadership Programme winners for Africa

The programme will also host more than 100 fellows and youth participants who will each receive up to US\$50 000 to be used for their community initiatives

FACEBOOK has announced the names of 116 people worldwide who have been selected to join the Facebook Community Leadership Program. Around a dozen African community leaders have been selected to become programme residents and fellows.

"Many community leaders worldwide and in Africa turn to Facebook to create connections through Facebook groups, WhatsApp or Messenger," says Nunu Ntshingila, Regional Director Facebook Africa. "This programme is all about empowering them with the tools, support and funding they need to advance their causes and build their communities."

Since announcing the programme in February, Facebook received more than 6 000 applications from all over the world. A selection committee, which

included employees as well as community experts from outside of Facebook, reviewed each application to identify leaders with a strong, clear and committed vision for their community.

Five participants have been selected globally as community Leaders in Residence, each will be awarded up to US \$1-million to fund their community initiative. The final amount received will be determined based on final budget proposal created and submitted by each resident as part of their program training.

Kenya's Noah Nasiali, the selected leader in residence for Africa, has brought together more than 100,000 farmers across Africa through a Facebook group in less than a year. Farming is one of Africa's most important industries, and Noah's community helps farmers obtain and share

critical information.

"Africa Farmers Club was formed to help farmers come together to access credible, reliable and applicable farming information that will help them develop their skills and most importantly help them to get a market for their produce and in the end get returns for their hard work. I invite group members to share their stories both positive and negative through pictures so that we can learn together. Whenever possible I personally visit members face-to-face to see for myself their challenges and we discuss how they can overcome and at the same time and improve. Our community aims to contribute to the Sustainable Development Goal which is to end hunger, achieve food security and improved nutrition and promote sustainable agriculture," said Nasiali.

Nigerian ports and China sign MoU

THE Nigerian Ports Authority (NPA) have signed a memorandum of understanding (MoU) with the Chinese Guangzhou Port Authority to improve the efficiency of port operations in the African country.

The joint promotion of effective logistics through information sharing forms part of the agreement signed during the ongoing African Regional Conference of the International Association of Ports and Harbours in Abuja.

According to NPA managing director Hadiza Bala Usman, the agreement will run for a period of two years and thereafter is renewable on a yearly basis. It will also include a training exchange programme for management staff and technical specialists from Nigeria's port authority.

Reprinted from FWT Online

Port of Cape Town's training centre opens

TRANSNET National Ports Authority (TNPA) has successfully completed the construction of its Maritime Training Centre at the Port of Cape Town and the institution ran its first courses in September 2018. TNPA refurbished an underutilised building at the port to house the centre, which will offer marine skills development programmes and apprenticeships to youth from previously disadvantaged communities and employees within Transnet.

The project is part of TNPA's role as a lead implementer of Government's Operation Phakisa programme which aims to unlock the economic potential of the country's Oceans Economy. Maritime skills development is crucial for the achievement of ambitious targets within the programme.



Cape Town Port Manager, Mpumi Dweba-Kwetana, said: "As an agency of the state we have a responsibility to contribute positively to the economy of the country by providing proper skills development programmes, training artisans and developing engineers to ensure the sustain-

ability of our ports and to stimulate growth of the maritime economy. These skills will ensure that young people can participate meaningfully in the economic development of the country."

Marine courses on offer at the new centre will include the accredited Dock Master

Training Programme, Ship and Boat Building courses, a Ship Maintenance programme and internationally accredited Lighthouse and Navigational Systems programmes.

The Maritime Training Centre will leverage off existing partnerships with institutions such as the Transnet

Maritime School of Excellence (MSoE), False Bay College, Cape Peninsula University of Technology (CPUT) and Northlink College.

Key training programmes will include General Purpose Rating, Berthing Master, Master Port Operations, Skipper Port Operations, Able Seafarer Deck, Ordinary Seafarer Engine, Ordinary Seafarer Deck, Fitter and Turner, Electrician and Information Communication and Technology courses.

Demand is high for critical skills such as Dock Masters who often work abnormal hours due to shortages. TNPA needs to train more than 50 dock masters across the port system.

Transnet runs a number of programmes to address these skills gaps. The Transnet Academy offers comprehensive

training pertaining to maritime, rail and pipelines. There are also programmes for Young Professionals in Training, Engineers in Training, Technicians in Training, as well as Marine Cadet and Marine Pilot training programmes, including bursaries and workplace experience.

"Through the Maritime Training Centre, we aspire to develop the skills of the South African workforce, increase the levels of investment in education and training and use the workplace as an active learning environment," said Dweba-Kwetana.

She also said TNPA employees would be provided with opportunities to acquire new skills, in addition to the centre being used to improve the employment prospects of previously disadvantaged persons.

Cummins shines brightly in the Offshore Diamond Mining Market

The Africa and Middle Marine business are delighted to announce the winning of the tender and supply of an emergency diesel genset (EDG) for the M.V DEBMAR ATLANTIC owned by Debeers Marine Namibia.

The MV DEBMAR ATLANTIC is a diamond mining vessel, built in 1978 with a gross tonnage of 10185 and sails under the Namibian flag. It was recently in Cape Town port for scheduled maintenance. The Cummins engine supplied in the package is a KTA38DM1 IMOII delivering 930kw connected to a Stamford HCM634K Alternator.

The Cummins EDG replaced a dated non Cummins engine. What makes this success all the more satisfying is that this turnkey solution was fully assembled and manufactured using our local application engineering team at the Cummins Marine Centre of Excellence in Cape Town.

Local scope of supply included CAD drawings, Exhaust integration, Cooling system and radiator, Factory Acceptance Testing (FAT), Certification to American Bureau of Shipping (ABS), commissioning, packaging, On-site training, Tooling, critical and unrestricted parts.

Great teamwork from Gerhard Potgieter, Vernon Meyer, Petrus Louie and Mark Sylvester made this project success.

This is a first for Cummins to win in a market that has always been dominated by our key competitors. More Cummins success stories to follow in the Marine market . . . watch this space!



Cummins Marine team with De Beers Marine Engineering leadership at Cummins Cape Town.



MV DEBMAR ATLANTIC



Andy Pilkington
Mark Sylvester
Cape Town

andy.pilkington@cummins.com
mark.sylvester@cummins.com
021 945 1888

Jurgen Steen
Edward Strydom
www.cummins.com

jurgen.steen@cummins.com
edward.strydom@cummins.com

Carrier cargo liability v first party cover



Kennedy Ntenjwa.

RECENTLY a marine insurer paid a heavy penalty after it was identified that they were breaking the Financial Advisory and Intermediary Services (FAIS) & Short-Term Insurance Act (STIA) regulations. The main issues were that the carrier/third party sold insurance to the cargo owners, and the policy was issued in the name of the carrier on behalf of the cargo owners, without adhering to the relevant FAIS & STIA legislation.

Kennedy Ntenjwa, Aon South Africa's Broking Centre Man-

ager for Marine says most carriers do not want to be bothered or burdened with the administration and compliance issues around STIA & FAIS.

Simply put: Offering the carrier a first party policy on behalf of the cargo owner is not a feasible approach. The situation is further exacerbated when the carrier cannot repay or refuses to repay a loss suffered to goods while in their care, custody or control. The cargo owner's only recourse is to take legal action against the carrier, not

to mention taking their business elsewhere. It is therefore quintessential for carriers to have liability cover in place to secure their livelihood," explains Kennedy.

Understanding the difference between a first party policy and a carrier cargo liability offering, is crucial. "A common misconception in the freight industry is that a carrier goods in transit policy, also known as First Party cover, benefits the carrier; when it actually benefits the owner of the goods being transported," Kennedy points out.

Insurable interest arises through ownership and the insurer will always indemnify the owner of the goods. The carrier enjoys no cover under a first party policy. The carrier can, however, arrange cover on behalf of the cargo owner if they receive written instruction to do so. However, the carrier can only offer cover if they:

- have a valid FSP License issued by the FSB,
- are FAIS compliant as a financial service provider as per the amended FAIS Act,
- have approval from an insurer, and have the necessary authority regarding STIA to collect/handle premiums in a legally compliant manner.

A carrier cargo liability policy is a third-party liability policy that provides cover to the carrier of the goods. "The carrier is able to insure any acts of negligence, whether gross negligence or common-law negligence, for loss or damage to third-party property if the cargo

owner is enforcing a claim against the carrier," says Kennedy. "The insurable interest arises from any liability that is defined in the insurance policy that may cause damage to a customer's property while transporting it. The emphasis being: whilst the customer's property is in the carrier's or their approved sub-contractors' care, custody or control. It indemnifies the carrier and not the owner of the goods," he explains. Carrier cargo liability policies need to be structured in such a way that they comply with FSB regulations.

"In this respect, cargo carriers need to understand that they may not offer full first-party goods in transit cover to a client or pass the insurance cost to the actual cargo owners," Kennedy clarifies. Cargo carriers are able to negotiate commercial contracts, independent from insurance policies, with cargo owners. However, they'll then accept certain liabilities following an event while the goods are in their care, custody or control, which may result in financial loss to the cargo owner.

"Cargo carriers need to be cognisant of the fact that a private and independent commercial contract between themselves and a cargo owner translates into no cover for consequential losses through an insurer. Any insurance agreement entered into with the cargo carrier is structured around liability and defined perils as per the relevant institute and non-institute clauses or any other warranties that the insurance policy may contain, with cover not extended to loss

or damage in general," warns Kennedy.

"Although legal liability goods in transit cover has been around for many years, the difficulty lies in the fact that most insurers offer policies on a strict legal liability basis. Losses will only be settled if it can be proven that the loss/damage directly resulted from gross negligence by the carrier, not providing the carrier with an optimal solution."

"This has led to the development of a more relaxed or carrier-friendly carriers cargo liability policy which a select few marine markets are now offering," explains Kennedy. "The FSB's legislative intent and practical application around policies issued to third parties are still considered to be a grey area, even by expert SA maritime lawyers," says Kennedy, "it is therefore frugal to use the Short Term Insurance Act No. 53 of 1998 as a barometer. This is exactly where the insights and expertise of a professional broker that specialises in maritime insurance can prove to be invaluable. Testing different scenarios and making sure that you have all your bases covered is a task best undertaken with a broker by your side," concludes Kennedy.

HMM confirms megaship order

HMM has signed a contract with three shipyards for 20 new environmentally mega containerhips, according to a statement.

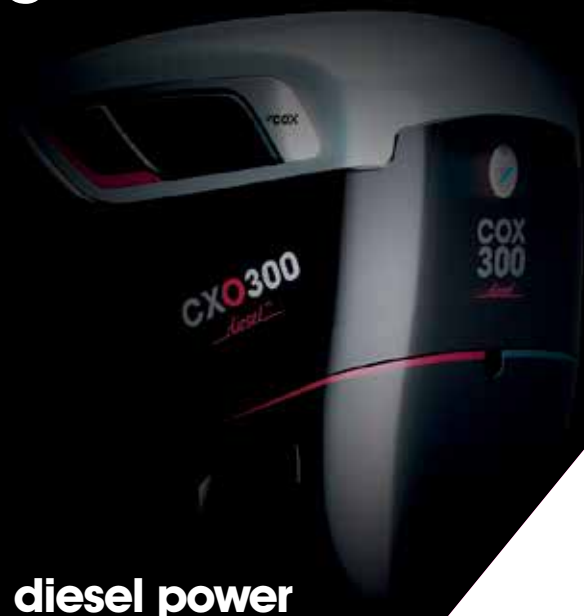
Under the deals, signed on September 28, Dawoo Shipbuilding and Marine Engineering (DSME) and Samsung Heavy Industries (SHI) will build seven and five 23,000 TEU containerhips respectively, which are expected to be delivered by the second quarter of 2020.

The remaining eight will have a capacity of 15,000 TEU, and will be built by Hyundai Heavy Industries (HHI), with an expected delivery date of 2021's second quarter.

Plans for the fleet expansion were first announced in December 2017, and were part of HMM's goal to have a 5% share of the global container shipping market by 2021.

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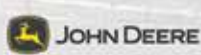
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Hapag-Lloyd invests in growing East African market



HAPAG-Lloyd is focusing on the growing market in East Africa. With annual growth rates of approximately six percent, the region tops the list on the African continent. Kenya, in particular, is developing with significantly rising import and export figures as well as massive investments in public infrastructure.

In April 2018 Hapag-Lloyd launched the East Africa Service (EAS), its first dedicated service to East Africa. The weekly service sails from Jeddah to Mombasa, and from there to Dar es Salaam, in Tanzania, and directly back to Jeddah.

After a successful start this service will be expanded in September with a weekly connection to and from Nhava Sheva, Mundra, Khor Fakkan, Jebel Ali, Mombasa and Dar es Salaam. The so called EAS2 will replace the current EAS service and directly link the Arabian Gulf and the West Coast of India with East Africa.

Hapag-Lloyd also offers inland transportation to and from East African hinterland locations of Bujumbura (Burundi), Kigali (Rwanda), Lubumbashi (Democratic Republic of Congo), Lusaka (Zambia) and Kampala (Uganda).

“I am delighted that our East Africa Service from and to Kenya is developing so positively. After only four months in operation, we have significantly expanded our business with overall vessel utilization beyond our expectations,” said Dheeraj Bhatia, Managing Director Africa, Middle East and Indian Subcontinent for Hapag-Lloyd AG. “With our upcoming new EAS2 service we will be able to offer even better connections from and to East Africa. All in all we are experiencing growing client demand which demonstrates the economic potential of Kenya.”

The GDP of Kenya has grown significantly in the last two years, rising by an average of approximately six percent. Kenya primarily exports coffee and tea, but also vegetables, fruits and textiles. The main imports are vehicles, spare parts, yarns, machines and electronic goods.

Crane brings relief to port maintenance

THE Port of Ngqura has acquired its first piece of maintenance equipment since the port became operational in 2009. This crane truck, to the value of R1,8 million, was specifically modified to meet the port’s unique requirements.

A giant fishing rod

“It was adapted to have a winch and cable attached to the end of the crane’s boom so that tyre fenders that fall into the water could be fished out. The total depth of the sea bed from the top of the quay wall could be up to 23 m at the deepest point. The crane truck will be able to fish out any tyre fenders from this depth. It is basically a giant fishing rod!” said Tauqeer Ahmed, Deputy Port Engineer.

Benefits

With a lifting capacity of 10 tons and the ability to load and



The crane truck has a lifting capacity of 10 tons and can serve as a giant fishing rod in port.

transport a 6m container, it will mainly be used for maintenance of port infrastructure such as the Automated Mooring System, the Sand Bypass, quay walls and tyre and element fenders on the quay wall. It will also be used to transport equipment and maintenance material. The ultimate benefit of the crane truck will be to improve maintenance turnaround time and to save cost versus

hiring the equipment, which is costly and not always readily available.

Unique feature

The truck is supplied with a UD online Telematix service contract that monitors and maximises performance.

It will allow monitoring, amongst other things, the truck location, vehicle tracking, fuel consumption,

working hours and service intervals.

Local modification

The contract was awarded to Billson Trucking Port Elizabeth, who managed the modification locally. The truck and crane have different manufacturers. UD manufactured the truck, FASSI manufactured the crane and Rencor Engineering and Hydraulics installed the crane onto the truck.

Cummins X15 Splashes into the Marine Market

Cummins Inc. (NYSE: CMI) is thrilled to introduce a fuel and cost efficient version of its X15 engine for commercial marine market segments including inland waterways, commercial fishing and passenger transport

“Our marine X15 engine is yet another example of Cummins continued investment in the marine market,” said Andy Pilkington, Segment Director, Africa and Middle East Marine Business. “Following the introduction of our marine QSK95 engine, which has more power and durability than any other high speed marine engine in its class, our new marine X15 engine reinforces our commitment to deliver the products our customers need to be successful.”

The X15 utilizes the latest Cummins fuel system product, XPI. This common rail system provides the highest injection pressure of any other common rail system resulting in an efficient fuel burn for clean emissions and optimized fuel economy. In addition to this latest fuel system technology, X15 for marine uses the most intelligent Cummins engine control module, CM2350. CM2350 provides advanced diagnostic and monitoring capability, as well as engine protection through de-rates and automated engine shut downs to prevent catastrophic failures. The CM2350 technology also features fuel sensor monitoring, digital engine start/stop functionality, and gear pressure and temperature.

The first installation of Cummins X15 marine engines will take place in a Louisiana (USA) crew boat, replacing a dated non-Cummins engine, which will improve the efficiency and performance of the vessel. The marine X15 engine is a perfect option for owners looking to repower their older vessels. The engine will fit in place of various types of legacy engines. The X15 will save space in the engine room, deliver cleaner emissions and better fuel economy at a continuous duty power cycle. Cummins has shipped

2million 15L engines across multiple segments to date, due to the proven legacy of the X15 platform, Cummins is offering an industry leading two year warranty, proving the company’s commitment to quality. About Cummins Inc.

Cummins Inc., a global power leader, is a corporation of complementary business segments that design, manufacture, distribute and service a broad portfolio of power solutions. The company’s products range from diesel and natural gas engines to hybrid and electric platforms, as well as related technologies, including battery systems, fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana (U.S.A.), since its founding in 1919, Cummins currently employs approximately 58,600 people committed to powering a more prosperous world. Cummins serves customers in about 190 countries and territories through a network of some 500 company-owned and independent distributor locations and approximately 7,500 dealer locations. Cummins earned \$1 billion on sales of \$20.4 billion in 2017.

Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at www.twitter.com/cummins and on YouTube at www.youtube.com/cumminsinc.



Cummins Introduces the X15 Engine for Commercial Marine Market Segments



The engine will offer variable speed and fixed speed ratings between 450 HP and 600 HP.

The engine will meet U.S. EPA Tier 3 and International Maritime Organization Tier II emissions standards.

Cummins first unveiled the engine at Seawork International 2018.



Andy Pilkington
Mark Sylvester
Cape Town

andy.pilkington@cummins.com
mark.sylvester@cummins.com
021 945 1888

Jurgen Steen
Edward Strydom
www.cummins.com

jurgen.steen@cummins.com
edward.strydom@cummins.com

Drones all at sea

UNMANNED systems are finding a growing number of applications in the maritime sector, and have the potential to make a significant contribution to safety and risk management.

This year saw the first successful ocean rescue of two swimmers in rough seas in Australia by drone. A number of companies are developing drones for sea-based search

and rescue operations, as well as drones that can identify and warn swimmers of sharks. But drones are also finding some interesting commercial applications.

They are being used by class societies and marine surveyors to physically examine ships and cargo, while loss adjusters employ drones to assess damage to vessels. Allianz

has already used drones to assess marine claims, as well as property claims in the aftermath of last year's hurricanes and wildfires.

Operators are also using drones to assess the condition of assets, such as oil rigs, pipelines and offshore turbines, reducing the need for risky human inspections. In the North Sea, fishing vessels carrying drones are being used to undertake survey work and environmental monitoring.

Drones are likely to find many more uses in the maritime sector in the years to come, some of which could help prevent or mitigate losses, according to Volker Dierks, Head of Marine Hull Underwriting, AGCS Central & Eastern Europe.

"Drones make it simpler and quicker to examine a ship and its cargo, but it is easy to see how the technology could be used to assess environmental pollution damage or observe shipping traffic in congested transit routes," he said.

For example, drones can be used to carry out inspections of cargo tanks and holds, a risky task for crew. Dangerous gases are a notable cause of fatalities at sea, where enclosed cargo holds many contain noxious gases. Drones can also be employed to carry out inspections



at height, assess the structural integrity of a vessel or to monitor the loading of cargo.

Drones will also have an increasing role in spotting and avoiding hazards at sea. EU NAVFOR's anti-piracy naval mission has deployed drones to monitor the coast of Somalia and search for pirate activity.

"In the future we will see drones used to avoid hazards at sea. For example, they could be used by ships sailing in Arctic and Baltic waters to identify ice and show the route ahead," said Dierks.

If there is an incident, drones could also be used to assess damage, helping to mitigate losses, avoid loss of life or limit any potential environmental impact.

"If a vessel is grounded or suffers a collision – such as striking a reef

– the crew could use a drone to assess the condition of the hull and the surroundings. This could allow for faster and more informed decision-making and reduce the impact of an incident," he explained.

"If a captain has access to a drone on board it could help limit or prevent a loss – it could be used to assess possible buckling on a vessel that has sailed through heavy weather, for example."

HVCC signs supply chain initiative

HAMBURG Vessel Coordination Center (HVCC) and tug shipping company Kotug Smit Towage have agreed to collaborate in order to improve the efficiency and quality of ship handling at the Port of Hamburg, according to a statement.

The deal will see Kotug Smit get access to the HVCC time-related and geographically extensive planning system.

It will also have all relevant traffic data and real-time information relating to changes in ship call planning and terminal handling.

This includes environmental data, such as wind speed and water and tide levels, all of which will be processed and available on HVCC's dashboard solution, which will improve reaction time in the case of schedule changes and improve resource planning during peak traffic periods.

This is the latest data cooperation HVCC has agreed. In June 2018 it signed a deal with the Port of Rotterdam Authority to exchange data related to ships travelling between Rotterdam and Hamburg directly via an interface.

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First 100% black owned ship-owners in South Africa

CHILDHOOD friends Durand Naidoo and Thuso Mhlambi have realized a lifelong ambition by becoming the first 100% black owned ship-owners in South Africa.

The 33-year-old owners of Linsen Nambi, the company they started in 2012, made maritime history as youth owners when they bought Grindrod's Unicorn Bunker Services.

With their female empowerment partners, Women in Oil and Energy, they became the role model for the Government's initiative to unlock transformation in the maritime – and liquid fuels – industries.

Said Naidoo: "Linsen Nambi is a 100% black youth owned shipping company with highly skilled maritime professionals, strong customer relationships and owns its own ships.

"Therefore we are well placed for strategic acquisitions and organic growth to develop our infrastructure further."

He says the deal took a "concerted effort" from the private sector (Grindrod), government (IDC) & oil majors (BP, Engen and Chevron).

"It is unbelievable that it took this long, but is a first win for the recently legislated



Durand Naidoo and Thuso Mhlambi with President Cyril Ramaphosa.

Combined Maritime Transport Policy, which calls for black ownership in shipping."

Linsen Nambi's other founding member, Thuso Mhlambi said there was a great need for the private sector and the funding institutions to "better align themselves to Governments Development Plans to unlock more deals like ours".

He added: "I would like to see the private sector opening up this space to new entrants, something that will facilitate the creation of employment."

They already employ 110 people, a number they hope to increase significantly as they grow the business.

Since the inception of Linsen Nambi six years ago, the company has bought three bunker vessels in the ports of Durban and Cape

Town. These bunkers supply fuel to vessels; as Naidoo describes it: "In layman terms we are the petrol attendants of the sea."

Mhlambi says they are proud of their transformation successes: Seven out of twelve masters are black, all twelve chief officers and all twelve chief engineers in the company are black.

Said Mhlambi: "They give us the support and trust that we need to run the business.

"We selected WOE-SA as our partner on this deal because like ourselves – as black youth – black women have been marginalized in the South African economy. Therefore it was easy to sell them on the vision of reforming a sector that has been slow to change."

Major shipping lines to collect sulphur compliance costs from fuel surcharges

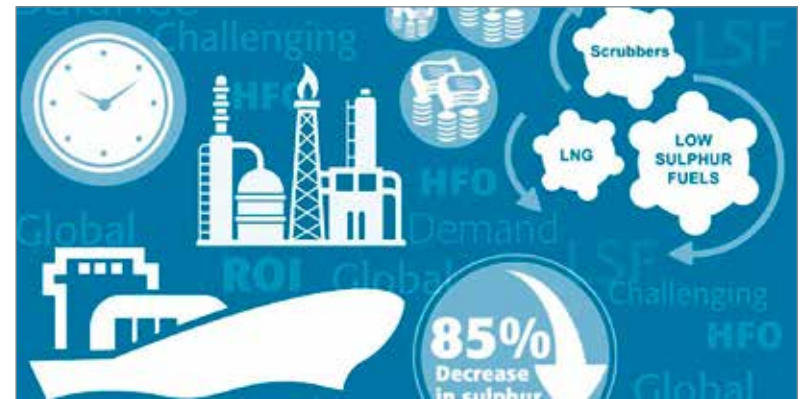
By Nicole Jacobs, FTW online

MSC and CMA CGM have become the latest container carriers to announce the introduction of bunker adjustment factor (BAF) surcharges on a trade-by-trade basis to offset the costs of compliance with the International Maritime Organisation's sulphur cap regulations.

Maersk recently announced that a new Bunker Adjustment Factor (BAF) would be introduced on 1 January 2019 to replace its current Standard Bunker Adjustment Factor surcharge.

A.P. Møller-Maersk chief commercial officer, Vincent Clerc, noted that in order to become compliant, shipowners would have to invest in compliant fuels, liquefied natural gas (LNG) or scrubber technology.

Clerc pointed out that the sulphur cap regulations – which required the lowering of sulphur in bunker fuels from the current 3.5% to 0.5% – would bring uncertainty and increases to fuel costs for shipping and therefore the company



Source: Konותרm

would need to recover these fuel-related costs.

While the global estimate for the additional fuel costs could be up to US\$15 billion, he said that Maersk Line expected its extra fuel costs to exceed US\$2 billion.

The BAF is calculated on two elements – namely the fuel price, calculated as the average fuel price in key bunkering ports around the world, and a trade factor that reflects the average fuel consumption on a given trade lane as a result of variables like transit time, fuel efficiency and trade imbalances between head haul and backhaul legs. According to Maersk, the surcharge will be charged separately from Maersk

Line's freight rate.

"The 2020 sulphur cap is a game-changer for the shipping industry. Maersk preparations are well under way and so are our customers' efforts to plan ahead," said Clerc. "The new BAF is a simple, fair and predictable mechanism that ensures clarity for our customers in planning their supply chains for this significant shift."

Adding his voice to the debate, CMA CGM Commercial Agencies Network senior vice president, Mathieu Friedberg, said that the IMO regulations would result in a major additional cost to the shipping line, estimated at an average US160/TEU.

"The implementa-

tion of this new regulation, which represents a major environmental advance for our sector, will affect all players in the shipping industry," he said. "In this context, we will inevitably have to review our sales policy regarding fuel surcharges."

South African Association of Ship Operators and Agents (Saaso) CEO, Peter Besnard, told FTW Online that he could not yet speculate whether any other lines would follow suit.

"These are tough times for shipping lines and there hasn't been much involvement by local authorities to ease the implementation of the sulphur cap regulations on the lines," he said.

New moves to grow SA ship registry

SIGNALLING growing moves by government to increase the ownership of shipping vessels under the South African flag, the South African Maritime Safety Authority (Samsa), Mineral Resources Council of South Africa, and ship owners recently agreed to enter formal discussions aimed at aiding efforts to boost domestic shipping.

"...local economy is barely benefiting..."

"Much of South Africa's cargo for trade export – estimated at 300 million tons per annum [and] valued at about R110 billion – comes from the country's minerals mining sector," said Samsa chief operations officer, Sobantu

Tilayi. "Yet, of about 13 000 trade cargo vessels reporting at South Africa ports to deliver imports and ship out local produce annually, less than a handful of vessels registered under the country's flag are participating.

"A clear indicator that the local economy is barely benefiting its own people, through the shipping business."

The Mineral Resources Council committed to entering a formal agreement with its members with regard to developing shipping ownership in the country, and National Treasury committed to addressing all tax issues affecting the shipping subsector.

The agreement was made during the first formal South Africa Shipping Industry Workshop, organised by Samsa at the Shera-

ton Hotel in Pretoria, where issue-focused consultations were held with directly affected or interested role players in the country's shipping transport sector.

Tilayi said that while government, by law, could stipulate what it considered to be an equitable share of cargo for locally registered ship owners, Samsa felt it prudent to first engage with stakeholders through the workshop. This included those within the bulk shipping industry as well as policy makers and regulatory authorities.

Additionally, he noted that the South African Ship Registry would see at least two more vessels registered before the end of 2019, bringing the number of South African-flagged ships to about half a dozen.



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LNG only 'viable option' today to tackle shipping's air quality issues

Peter Keller,
chairman SEA\LNG

AN improvement in the shipping market resulting a revival of newbuilding orders would see a dramatic increase in the adoption of LNG propulsion, according to SEA\LNG chairman Peter Keller.

While the uptake of LNG as marine fuel has not matched forecasts of a few years ago, Keller, who is both chairman of industry coalition SEA\LNG and executive vice president of TOTE owner of the world's first LNG-powered containerships, believes it has a strong future as a fuel for shipping helping to meet global demands for cleaner air.

"It really is the only thing that solves the air quality issues that the industry has been working on for decades by basically eliminating SOx, eliminating PM (particulate matter), and dramatically reducing NOx. The air quality issues continue to be very important, we see that lingering haze or smog over all of our cities and that's not good," he told Seatrade Maritime News in a recent interview.



The IMO's 0.5% global sulphur cap for marine fuel from 1 January 2020 means that shipowners will either have to use more expensive marine gas oil or hybrid fuels, install scrubbers to continue using high sulphur heavy fuel oil, or switch to alternative fuels such as LNG.

"It's pretty clear to me and others that LNG is safe, it's readily available we have tremendous amount supply around the world, and it is cost effective especially when viewed against compliant fuel," he said.

While technologies such as scrubbers make sense for older vessel retrofits Keller sees LNG as a strong choice for newbuildings. Keller noted that the downturn in shipping markets in recent

years had resulted a lacklustre shipbuilding environment.

But once this picks up, combined with owners looking at options to comply with the sulphur cap he said: "I think you will see the percentage of new ships ordered with LNG as propulsion capability start to increase dramatically."

Although handling the SOx issue very effectively the fact that LNG is still a fossil fuel means it will not meet the IMO's target for a 50% reduction in CO₂ emissions from shipping by 2050. However, it will reduce CO₂ emissions from a ship by 20 – 25%, a significant step towards that target.

"When we look at the other side of the problem – the companion problems of decar-

bonisation – it makes a contribution, fairly significant contribution. While it's not the answer it at least moves the needle and keeps us moving the right direction," Keller said.

He sees LNG being combined with other technologies such as using bio-fuels, more efficient hull design, and some yet to be invented to meet the 50% CO₂ reduction target. "I think as we look at air quality issues, and as we look at shipping start to contribute under carbon reduction initiatives, it's the only viable solution right now. At the end of day we could wait forever for alternatives."

Keller speaks from experience when it comes to LNG as marine fuel with the working for TOTE, which has operated two LNG-powered containerships between Jacksonville in the US and Puerto Rico for three-years now.

"They operate extremely well, they operate cleanly, and they provide all the environmental benefits we had anticipated to the people we serve. The important lesson is the fact it works," he stated.

Reprinted from SeaTrade Maritime News

IUMI worried over containership fires and mis-declared cargoes



CONTAINERSHIP fires and the increasing occurrence of mis-declared cargoes is a worrying trend for marine insurers, as pointed out by Sean Dalton, the International Union of Marine Insurance (IUMI) Cargo Committee Chair.

"The fire onboard Maersk Honam, which tragically killed five crew members, is the most recent example of this issue and the loss is likely to generate the largest general average claim in history. As vessels continue to grow larger, the accumulation of cargo values coupled with the increasing risk of onboard fires needs to be addressed urgently by all stakeholders," he added, speaking during IUMI's annual conference in Cape Town, South Africa.

The fire that claimed five lives in March this year has been identified as a perfect reminder of the importance of cargo insurance.

Namely, Maersk Line has declared general average, under which all parties with a financial interest in the voyage are to proportionally share the losses resulting from the incident. Shippers who did not purchase a general average coverage insurance will be liable to pay a proportional portion of the damage.

Other industry trends to keep in mind

Cyber threats continue to concern cargo insurers, not only in terms of immediate damages but also because of potential disruption to the onwards supply chain. According to IUMI, digitalization and big data hold the potential to provide cargo underwriters with better tools and capabilities to manage their business.

Speaking in Cape Town, Itai Sela, CEO of Israeli cyber-security specialist Naval Dome, called on the removal of the Clause CL 380

that excludes damage to computer systems, code or software from insurance, especially at a time when the maritime industry is moving towards connected, cloud-based technologies and autonomous operation.

"Why do insurers continue to implement CL 380 when there is a high probability that a computer will be hacked and, importantly, when there are many different ways and means of protecting shipboard computer systems?" Sela asked IUMI members.

"What we have is an industry on the cusp of a technological change. The rapid implementation of advanced autonomous technologies and machine learning capabilities will change the way in which ships are operated, but such developments will also leave the industry open to more system breaches and unauthorised intrusion unless there are systems and policies in place to mitigate against such risks."

Sela suggested the maritime industry should follow the automotive sector's lead. The sector has introduced software-based safety solutions to road vehicles that, despite not being initiated by the insurer, have proven to protect drivers (and insurers) against theft or damage, which helps towards mitigating risk and reduce premiums.

According to IUMI, the marine insurance sector continues to come to terms with the potential impact of cyber exposure (both malicious and non-malicious); incoming environmental regulations and their impact on hardware and operations; autonomous vessels; bunker contamination; and the accumulation of risks that quickly build as containership continue to grow both in size and capacity.

Chair of the Ocean Hull Committee, Mark

Edmondson, highlighted a continuing deterioration of premium income against the more positive picture of an improving risk profile.

"Whilst the shipping industry in general is showing some positive trends and the claims climate remains relatively stable, particularly for total losses and major partial losses, there does not appear to be any direct correlation between that and overall underwriting performance," he said.

"However, we estimate around USD 100 million of capacity has been removed from the market over the past year due to very low start-up activity and the withdrawal of a number of high profile hull insurers. Facilitation would appear to be under increasing pressure due to worsening performance and heightened regulatory scrutiny. Overall the deterioration of underwriting results, over what has been a considerable period, has appeared to have triggered a brake in the decline in market conditions."

An enhanced risk profile stemming from better quality tonnage and greater regulatory influence has encouraged a consistent improvement in the frequency of major casualty. However, the ocean hull market is still being buffeted by lower asset values, reduced utilisations, year-on-year erosion of premium and ever present volatility, IUMI said.

On the final day of the event, IUMI elected Richard Turner, European Director of Global Risk Solutions at RSA Insurance Group, as the new president. Richard succeeds Dieter Berg whose four-year term of office has been completed.

Reprinted from World Maritime News



 **HamiltonJet**

Seascope Marine Services
124 Service Road
Marine Drive, Paarden Eiland
Cape Town 7405, South Africa

Tel: +27 (0)21 511 8201
jdejong@seascopemarine.co.za
seascopemarine.co.za

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Lack of standardization stymies port-to-port productivity

By Peter Tirschwell,
first published in
JOC.com

IT is one of the ironies of container shipping. While the container may be one of the world's greatest universal standards, creating untold benefits to trade and prosperity, the process of standardization around the movement of the container remains woefully incomplete. (Above: The Port of Oakland.) Photo credit: Shutterstock.com.

When the JOC was building the Port Productivity database a few years ago, it slammed head on into an issue that is core to the reason why container trade remains highly inefficient despite the best efforts of technology: a lack of standardization on terms and data formats.

If JOC.com is going to say that the clock starts on a calculation of total berth moves per hour, it needs a common standard for when a ship is deemed to have arrived at the berth. Is it when the first line is secured, "lines down," or is it when the ship is fully tied up, "all fast?" There was no right or wrong answer because no one had ever sat down and agreed on what the answer should be.

But if one is going to set up a benchmarking exercise, as JOC.com did, to allow container lines to know if their total berth moves per hour are better or worse than similar-sized ships calling at the same terminal, and to allow terminals to compare their performance with one another, a common definition would be needed. For berth productivity, JOC.com settled on "all fast."

That is just one of numerous similar examples. What should be the common definition of estimated time of arrival (ETA)? That depends on who one is. "There is no clear definition of ETA," said Michael Bergmann, a veteran aviation expert who has been among those leading a major effort to create true standardization of maritime terms and data formats.

"When you are a pilot, ETA means arrival at the pickup point; they are not concerned when the ship is at the berth. When you are a terminal, you are con-



cerned with when the ship is arriving at the berth, so to them that is the ETA. They don't care when the ship picks up the pilot. The tug operator is concerned about when the carrier will be at the place where they need to connect to the ship.

"There are different actors that each have different definitions based on their own point of view," Bergmann said.

There is less confusion over the potential of communication based on standardized terms and data to deliver a host of performance, safety, and cost benefits. Whether between actors in a port or carriers and terminals or even competing ports, better communication can reduce ship transit, waiting times, and fuel costs; increase terminal asset utilization; and improve transport chain reliability for beneficial cargo owners.

If the captain of an 18 000-TEU ship leaving Rotterdam can be told the ship needs to travel at 14 knots instead of 18 knots to reach its destination terminal in Hamburg on schedule, he will save 22 metric tons (24.25 tons) of fuel.

Similar benefits prompted the international organization Eurocontrol, responsible for air navigation safety in Europe, to create the right conditions for European airports to talk to each other in a live environment to address growing performance and capacity challenges.

Today, 28 airports including all major gateways participate in a collaborative data-sharing program addressing similar inefficiencies to those in maritime because of a poor interface between container trade actors and lack of access to systems showing what is happening in live networks with

multiple dependencies.

Port community systems — largely siloed

The lack of common data definitions and messaging formats is one reason why increasingly sophisticated port community systems — Port Optimizer at Los Angeles, NxtPort at Antwerp, Nextlogic at Rotterdam, the Hamburg Vessel Coordination Center, the Shanghai E-Port, among many others — are largely siloed systems with limited ability to interact with those of other ports to facilitate end-to-end supply chains.

The data are optimized around ports, but ports are, by definition, only the beginning or end of an ocean transit, not both. Ports may be open to collaborating, as Rotterdam and Hamburg have started to do in monitoring ship transits, but not always.

"We see a lot of local solutions, different port community systems; they are different and proprietary," said Mikael Lind, a professor at Research Institutes of Sweden, who is also leading the effort to create maritime data standardization.

"If a ship is going to Shanghai to Rotterdam to Hamburg, they need to communicate to different systems."

Part of the problem is competitive. Common data standards and even the entire concept of data sharing sound good in principle, but the sharing of certain kinds of data could reveal poor performance and jeopardize commercial relationships.

Carriers, for example, have asked for assurances that data provided to certain port community systems don't get resold to their customers as that would provide the latter with a window into, say, on-time performance that might

be detrimental to the carrier in a commercial negotiation.

"The culture of shipping is rather closed, especially when it comes to data," Bergmann said. This serves to underscore the point that while the container may be one of the world's greatest standards, creating untold benefits to trade and prosperity, the process of standardization around the movement of the container remains woefully incomplete.

Bergmann and Lind, with others, have made progress. Standard terms and data formats are working their way to international committees owing to more than \$70 million in support from the European Union.

Mobilarm to Supply MSLD's to Dutch Navy

GLOBAL marine safety equipment provider, Mobilarm Limited has announced that it has secured its first production order for 90 Crewsafe V200 Maritime Survivor Locating Devices (MSLD) from the Royal Netherlands Navy (RNN) for use in

submarine escape and rescue.

The order forms part of a RNN upgrade of all submarine escape and rescue equipment, including new escape systems, escape suits and emergency locating beacons. The order was secured following successful field trials of

the Crewsafe V200 for the United States Naval Sea Systems Command ("NAVSEA") in June and July 2011. The NAVSEA testing was the final stage of the Foreign Comparative Testing (FCT) contract awarded to Mobilarm in April 2010.

Norway to deploy drones to sniff out sulphur polluters

THE Norwegian Maritime Authority plans to use drones equipped with sensors to measure sulphur content from ships' exhaust systems in its inspection work.

The decision was made following several tests this year that proved drones' ability to measure successfully the sulphur content emitted by ships and detect those in potential breach of regulations.

Namely, the country's coast pertains to the Baltic and North Seas Emission Control Area that doesn't allow sulphur content in fuel that is above 0.1 pct.

The move is in line with the maritime authority's focus on the environmental issues faced by the maritime industry, especially ahead of the ever more



stricter regulations, such as the upcoming 2020 sulphur cap.

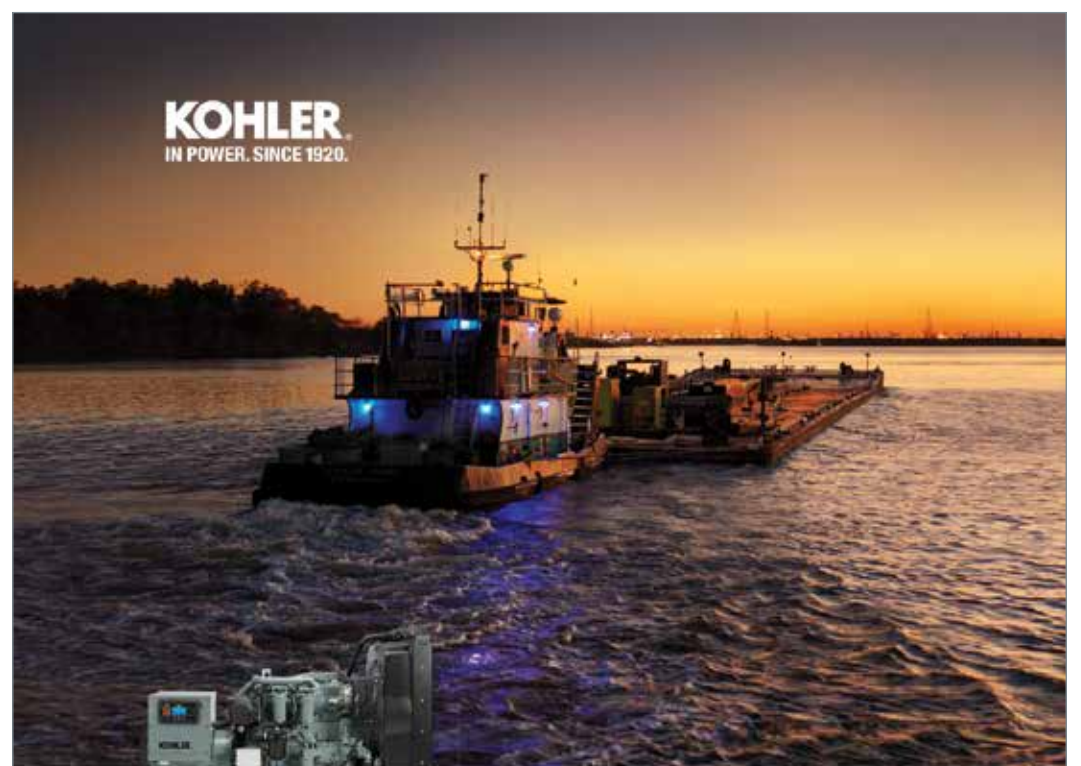
"With this focus, we want to influence the industry to think and act in an environmentally-friendly way" says Olav Akselsen, NMAs Director General of Shipping and Navigation, stressing that the aim is also to raise awareness about all new rules on discharges of pollutants into sea and air.

The International

Maritime Organization (IMO) has designated the North Sea and the Baltic Sea as NOx Emission Control Area (NECA) starting from January 1, 2021 onwards.

The regulation applies to all vessels built after 2021, and requires a reduction of NOx emissions by 80% compared to the present emission level.

As informed, the drone inspections will start as of 2019.



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Strip curtains increase productivity



Apex Strip Curtains allow the unhindered and safe passage of people and forklift trucks.

WITH ever more pressure being placed on manufacturing operations to remain competitive, focus is being directed an efficient, less wasteful operational environment. Factors that influence this are employee working conditions as which impacts directly on quality and productivity.

While an adequate heating, ventilation and air conditioning (HVAC) system can play an important role in ensuring the comfort of workers, this is not always a feasible option.

In some instances, the plant design does not lend itself to the inclusion of an HVAC system. In others the capital cost and running costs of a power-hungry HVAC system makes it impractical.

Wim Dassing, managing director of Apex Strip Curtains & Doors, says that a cost effective and practical alternative to an HVAC system is Apex General Purpose Strip Curtains.

Over the past more than 37 years, Apex Strip Curtains & Doors has refined its product offering by closely collaborating with industry on the optimal product solutions for each application.

The resultant Apex General Purpose Strip

Curtains have been designed and developed with the variable South African climate in mind.

"Some parts of South Africa are considered to be desert, while other parts have a temperate climate and yet others are subtropical. Such extremes in temperature and humidity require careful attention to design and engineering detail to ensure a strip curtain that works effectively, irrespective of the location," says Dassing.

In addition to being able to control the influx of cold or hot exterior air, the Apex General Purpose Strip Curtains are designed to reduce the levels of dust as well as the in-

gress of birds, rodents and insects.

In industries where hygiene and cleanliness are critical, these strip curtains can prevent the passage of unwanted contaminants, but still allow the unhindered and safe passage of people and forklift trucks.

Another added benefit is the reduction of noise levels, from either inside the plant facility or from outside.

The specially formulated PVC material used for the company in the manufacture of its strip curtains provides a durable, yet flexible barrier that does not become brittle over time.

Another design element that the com-

pany has incorporated and patented is the Balledge® feature. This rounded edge on the strips not only ensures an effective thermal seal at all times, but also allows the strips to part easily under pressure for the easy and scratch-free passage of people and goods from one area to another.

The strips are available on a metre by metre basis, or as a complete installation together with hanging hardware.

A network of agents represents Apex Strip Curtains & Doors throughout South Africa, and technical and installation support is readily available from the company.

JCH offers an extensive fleet of access platforms, telehandlers

EXTENDING its total lifting solution for customers, Johnson Crane Hire now offers an extensive fleet of access platforms and telescopic handlers from its branch network around South Africa. According to Steve Robson of Johnson Crane Hire's business development executive, the new units were put in place last year after the company concluded its supply agreement with a leading international OEM.

"Our expansion into the platform and telehandler business was primarily to enhance our offering to our many blue-chip customers, who over the years have tended to prefer working with one reliable partner for all their lifting and access requirements," says Robson. "The synergy between

these different types of equipment means that we can further assist customers in promoting productivity and safety on site."

Johnson Crane Hire's national footprint of 13 branches is therefore now equipped with its own access platforms and telehandlers, giving customers immediate access to them, and the branches continue to provide technical support as well. The new fleet includes platforms with a working height from 12 to 28 metres and telehandlers with capacities from 2 ton to 9 ton.

Robson highlights that the new equipment has been very well received in a variety of sectors to date, from construction, mining and marine to petrochemical and power generation. With the company's



Johnson Crane Hire's 13 branches are now equipped with access platforms and telehandlers for hire.

long history in serving the construction sector, this new range of equipment is allowing it to see more of the 'inside' of big commercial or retail developments, rather than just the big crane work on the outside.

"Shopfitters in shopping malls are part of this new customer base for us, as well as lighting and electrical

installation contractors," says Robson. "The added equipment range has also grown our opportunities in big warehouses, storage units and even in airports. We have even found considerable demand from the entertainment sector, where South Africa is becoming an increasingly popular destination for film-shoots."

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Cranes for tankhouses

THE African market for tankhouse cranes is flourishing, with strong demand in a geographical band stretching from the Equator to the Tropic of Capricorn. For end users of this type of crane, the main concern remains the same – prompt and effective after sales service.

Tankhouse cranes are double-girder electric travelling overhead machines that lift and position copper plates and slabs during electrolysis, the fourth and final step of the pyrometallurgical refining process used with certain types of copper ore.

One leading crane manufacturer, Condra, reports that tenders for as many as 30 tankhouse cranes are currently under evaluation.

Eight are for mines in the Phalaborwa and Rustenburg areas of South Africa, and 22 are for the Central African Copperbelt – ten for mines in Zambia and twelve for the southern Democratic Republic of the Congo.

Crane capacities are all around 5 tons, with a dual bottom-block system on each one to keep the sheets level while they are moved.

The total value of all these tenders is some R120-million; tankhouse cranes being technically advanced machines priced at about R2,5-million each excluding cabins, air conditioning and the special ergonomics usually ordered as extras to cater for the very high crane speeds – about twice as fast as the average man can run.

Previously, Condra has manufactured tankhouse cranes that include three double-girder overhead machines for the copper and cobalt leaching plants at the Ruashi Mine near Lubumbashi in the southern DRC, and an undisclosed number of machines for similar plants at a copper mine in Zambia.

To achieve effective levels of production during electrolysis, Condra designs these cranes to achieve high long-travel speeds of between 100 and 140 metres per minute (the standard speed for overhead crane long-travel is around 30 metres per minute).

The company also keeps an eye on the corrosive nature of the tankhouse environment, offering a pressure test on crane

girders in addition to the special paint specifications usually requested by the end user.

There must also be effective crane service and maintenance which, according to Condra, is lacking among European competitors because of the absence of lo-

cal agents with spare parts holdings and qualified service ability. Spare parts ordered from Europe can take up to two months to arrive.

By contrast, Condra's agent for the Copperbelt, Kitwe-based EC Mining, holds readily available stocks of spare parts

and carries out machine maintenance at all installation sites.

As an example of the problems that poor after sales service can cause, Condra points to a Copperbelt mine where spares and maintenance is no longer available for two cranes supplied by a

northern hemisphere competitor.

A similar situation at a Cape Town zinc plant recently resulted in three overhead cranes undergoing this type of conversion at Condra's Germiston works, outside Johannesburg, to facilitate effective maintenance into the future.



Typical overhead cranes under manufacture in Condra's factory.



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Key factors in warehouse design

Colin Airdrie, a specialist in Logistics and Supply Chain Management, discusses the key factors that will impact on the optimum design required to meet your warehousing or storage requirements

FOUR factors should be considered when designing or laying out any storage or distribution facility. Be it a large multi-temperated composite distribution centre servicing a high market network, a spare parts store in a north mobile service centre, or raw materials store supporting a manufacturing operation.

The four basic factors can be easily remembered using the mnemonic FAST or fast standing for:

- Flow
- A-Accessibility
- S-space
- T-Throughput

These are not in any order of priority. Each is as important as the other and your aim is to obtain the best compromise of these often conflicting influences. As one factor is considered and altered, each of the other should be revisited to see what is the impact of that change on the whole process.

1. Flow - What we're looking for here is a logical sequence of operations within the warehouse where each activity located as close as possible to that which precedes it and also the function that follows it. We are concerned with the controlled and uninterrupted movement of materials, people and traffic with, if possible, no cross flow clashes or areas of high traffic or work density. It is also concerned with the



awareness of where material is located within the system, and the status and location in the storage and handling equipment and medium. Our aim is to site and position the various warehouse activities in order to contribute to a smooth flow of operations with a minimum amount of movement and disruption.

2. Accessibility - We are not only talking about whether or not we can get to the product. But can we get to the required level of pack? Take the example of bottled water for instance, from major FMC distribution centre we'll be looking at being able to receive and issue product by the pallet load possibly even by the truck load. So you only need to access full pallets and since it is very long shelf life, strict first in first out by row to individual pallet level

need not be followed. At the wholesaler or distributor level, you might be accessing down to case level and then in the convenience store stock room individual bottles. It can go further than this. For pharmaceuticals, accessibility may need to be beyond individual item level down to specific lock and batch number. The requirements of levels of accessibility must be achieved especially in the pick base and fast moving stock holding areas with a minimum compromise to the next factor, which is the use of space.

3. Space - When considering how to use the available space the maximum should be allocated to operational storage and stock processing purposes. And the minimum space given up for associated functions such as offices, working areas,

empty pallets storage, battery charging, etc. Today's wide range of storage media available on the market allows us to make optimum use of a cubic capacity of the available space, not just the floor area. As most of these equipment is free standing and requires no structural support from the building itself, it means that the building can be of the simplest and cheapest big box design. It also allows us to build inflexibility to the operation by selecting the storage media to meet the current stock profile and then change it as the operation evolves to meet future requirements. This can be done without expensive and disruptive changes to the actual building. But remember, you still have to consider flow accessibility and now finally:

4. Throughput - When we look at throughput, where not

only looking at the categories of product parting through the warehouse but also the nature of the product and its velocity through the flow. By nature, we mean the handling characteristics, dimensions and any other factors that will impact on how it is moved through the flow such as hazard, bulk, fragility, security requirements and compatibility with other products. The velocity of the product will consider the volumes moving through the warehouse on a daily basis. Link analysis analytic. Pick period activities need to be determined as do minimum activity levels. A high degree of availability of accurate throughput data will assist greatly in the outcome of the design or layout exercise. The better the data and the longest spent on collecting and analysing it, the less the risk, however it is still possible to come up with an acceptable solution when one does not have the luxury of accurate data going back into history. You have to do the best with what is available.

So in summary, when considering your warehouse layout or design, the factors of Flow, Accessibility and Space must be balanced to enable the demand to Throughput in terms of volume passing through and the time parameters to be met."

Enabling warehouse automation

WHILE machine-learning and artificial intelligence (AI) have gotten its share of the limelight recently, there is a third component that is becoming more prevalent in warehouses and manufacturing plants around the world; robots and process automation. Even though this is hardly new, the potential when paired with the previous two elements and enterprise resource planning (ERP) solutions is significant to enhance any shop floor environment.

Given how technology is evolving, today's robots are significantly more intelligent than their predecessors. Even though cynics argue that this could negatively impact jobs, the reverse is true. Yes, the capabilities of robots on shop floors and in warehouses can easily reduce much of the human labour element, but it also provides manufacturers with the platform to upskill their workforce.

Being more productive

Like the efficiency improvements when businesses moved from fax machines to mobile phones, machine-learning and AI greatly enhance automation and provide the ability to react quicker, be more agile to market demands, and connect more easily to the Internet of Things (IoT) ecosystem.

And while robots certainly bring value for accountability, they must link to all facets of the digital and real world

environments. This is where ERP becomes increasingly essential in any modern shop floor or manufacturing environment. Without having the ability to manage these components, link to the available data, and understand where efficiency gains are to be had, companies can easily lose traction to their competitors. ERP is an enabler that brings more dynamic integration from the shop floor and more effectively gives vital accountability (and traceability) for digitally-led businesses.

These efficiency improvements can also be felt in evolving into a more productive organisation. Thanks to IoT and the connectedness of manufacturing environments, employees, business partners, and suppliers can have real-time access to the shop floor through any device. This enables them to have access to stock levels, monitor deliveries, and other important elements like profitability, cash, and so on, directly from within the ERP system on their device.

Driving profits

In turn, this increased visibility to real-time data ensures a business can better manage operations across business units or locations, leading to improved profitability. Take the role of robots, machine-learning, and AI as an example. By freeing up employees from tasks, companies can upskill them to deliver more strategic value to the organisation. There will always be a need for the creative and strategic value workers can provide. Through training and other skills development initiatives, this can be focused with better service delivery, leading to a likely increase in profits.

In a digital environment, automation takes many different forms. Therefore, a robust ERP solution is needed to ensure that the organisation can more easily accommodate the myriad of open architectures and solutions out there driving machine-learning, AI, and the like. In many respects, this adds a degree of future-proofing to a digital organisation as it is more easily able to adapt to any new innovations.

Modern business leaders are achieving benefits using readily available technology, such as drones, to reduce laborious tasks such as manual stock takes. Not science fiction but rather science fact as shop floors embrace a new level of sophistication.



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What is your biggest cost driver in a forklift?

THERE is a school of thought that fuel costs constitute the bulk of a machine's running costs. While this may be true in some operations, John Valentine, national systems manager at Goscor Lift Truck Company (GLTC), asserts "In our experience, cost of fuel is ancillary to the most important cost driver in forklift ownership – driver cost".



These systems analyse driver behaviour and generate easy-to-read reports.

Outside of the lift truck itself, Valentine says the driver/operator is in fact the biggest cost as far as the ownership of a forklift is concerned, but also potentially the biggest saving.

"Firstly, there is the cost of recruitment, driver training, uniform and the necessary PPE – that's actually before the real work starts. Then there is the ongoing cost of checklist books, salaries or wages, bonuses, refresher training every two years and a myriad of other operator improvement related costs," explains Valentine.

Not so easy to calculate are the hidden costs of drivers/operators, namely labour unrest, damages to machine/racking/product and health & safety violation – the list goes on. By all accounts, these translate into a far greater cost than fuel on average.

Potential saving

On the other hand, having a driver doing exactly what they were trained to do is potentially a significant sav-

ing. "This translates into increased productive machine hours, lower fuel costs, lower abuse-related costs and an extended machine lifecycle in general," says Valentine, adding that this of course largely depends on the right attitude – backed by suitable controls.

Valentine advises that one of the most important elements in this regard is practising Ignition Controls. By simply turning the machine off when not in use as opposed to leaving it idling, averts unnecessary burning of fuel or battery drainage.

"I believe that investing in driver skills turns an onerous disciplinary task into one that rewards the much needed correct behaviours," he says.

He, however, reasons that the downside is that while fleet owners expect the best out of their operators/drivers, they often don't want the additional management time that comes with the necessary interventions. This is why GLTC invests significantly in

Forklift Management Devices. "When used correctly, devices – such as the Goscor Fleet Management Systems – help create professional driver behaviour through the provision of valuable insights," he says.

Furthermore, the easy-to-read data from these devices is sent directly to the machine owner, allowing them to have all the operational metrics right at their fingertips.

"These systems analyse driver behaviour and generate easy-to-read reports that allow for identification of potential areas for improvement," adds Valentine.

"GLTC not only promotes, fits and uses such devices, we actively analyse the data, thereby enhancing our service to customers and ultimately reduce their operational costs. With GLTC, it's not simply about buying a machine from a reputable dealer – we regard it as purchasing a lifetime partnership and commitment from a trusted solutions provider," concludes Valentine.

The future of logistics

DHL showcased the key trends that could impact the logistics industry in the next five to ten years, at an event held in Sandton, Johannesburg during September.

Speaking at the event, Denis Niezgod, DHL Customer Solutions & Innovation said: "We grow into future logistics verticals by partnering with think-tanks and academia, industry giants and start-ups alike, to incubate ideas and invest in new business models, catalysing business transformation."

Professionals from the technology, engineering, energy, life sciences and financial services sectors attended the event and were able to interact directly with some of the ground-breaking technologies coming out of the Deutsche Post DHL Innovation Centre showcased on the day.

Among them, new internet of things (IoT) sensors, enabling connected processes that ensure end-to-end visibility; the Effibot – a collaborative

follow-me robot assisting employees in their picking tasks and sensor technology examples such as low-cost dimensioning sensor technology which can dimension any object within seconds, removing the need for time-consuming manual measuring processes using measuring tape or existing but expensive industrial dimensioning systems.

Attendees also had the opportunity to take a virtual reality tour of the DHL Innovation Centre in Germany.

Key findings of the fourth edition of the DHL Logistics Trend Radar 2018/19 were also revealed.

Hennie Heymans, CEO DHL Express Sub Saharan Africa, says that digitalization is driving transformation in the logistics sector, making innovation more important than ever before.

Customer centricity will be key to deliver on customer demands for a faster and more convenient logistics experi-

ence, says Heymans. An ever increasing amount of goods that can be purchased online – especially in the B2B market, is driving the need for B2B Omni-channel Logistics solutions. He adds that customer demand is also driving growth in direct-to-consumer shipments of time-and-temperature sensitive goods. "This Fresh Chain will require new innovations in packaging, storage and delivery of goods, such as groceries and pharmaceuticals. A key area for innovation in the last-mile will be the integration of logistics services into smart home environments captured as the trend of Connected Life.

Sustainability will become a mandate to operate in the logistics industry, as governments, cities and solution providers commit to sweeping agreements to cut down on CO2 emissions and waste. "DHL for example, has committed to becoming emissions-free by 2050. Green Energy Logistics – the electrifi-

cation of logistics fleets and facilities – provide huge potential for logistics to become more environmentally friendly. Smart Containerization in transportation will also be important in developing environmentally friendly formats for delivery in congested cities," he says.

Technology will become widespread in logistics as the cost-performance-ratio tips for key trends such as Internet of Things (IoT) and Artificial Intelligence (AI) in the next years. One trend that can accelerate this is the spread of next-generation wireless networks that can significantly increase the economics and value derived from connectivity in the supply chain, explains Heymans. He notes, "Another trend highlighted in this edition is blockchain where there has been a lot of hype and promise for the technology, but achieving industry buy-in may prove a significant hurdle to adoption."




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New oil-injected screw compressor

THE GA 90+160 (VSD+) oil-injected screw compressors, the latest air compressor range in Atlas Copco's smart AIR solutions portfolio, are designed for reduced energy consumption and ease of installation and service. The range features state-of-the-art compression elements with Smart Injection technology coupled with highly efficient oil-cooled IE4 and IE5 motors that require no service interventions. The new Elektronikon® Touch controller with integrated smart algorithms further reduces energy consumption.

The latest generation of GA compressors is particularly well suited to the mining industry, metal processing and power plants where its IP66 drive train offers complete protection from environmental dust and moisture ensuring reliable operation even in the harshest environmental con-



ditions. This reliability also provides long and trouble-free life in general industrial applications in ambient temperatures of up to 55°C. Optimum efficiency is ensured through a highly efficient drive train, low internal pressure drops and precise control from the Elektronikon® Touch.

All components are designed for ease of service with the most commonly serviceable parts grouped together for ease of access.

Furthermore, the patented portal design enables full access to all components when more extensive maintenance is required. "Subsequently, service time on these GA compressors is halved compared to similar designs leading to increased uptime and improved productivity," notes JC Lombard, Business Line Manager – Atlas Copco Oil-free Air Division.

The GA 90+160 (VSD+) oil-injected

screw compressors are available in water- and air-cooled versions, with fixed or variable speed drive and with an optional integrated dryer. Atlas Copco provides customers with a tip to toe 5-year Warranty Plus program on the complete machine, ensuring smooth operation in the harshest environments. The new Optimizer 4.0 central controller replaces the company's ES16 central control-

ler. It enables a compressed air system to be optimised through selection of the most efficient combination of machines, such as compressors, dryers, filters, controllers, energy recovery systems, generators, air receivers, coolers and boosters. Through a highly intuitive user interface, the end-user can view the performance and energy consumption of each machine as well as of the whole system.

Optimizer 4.0 can also be monitored through a customer's PC via LAN, a SCADA system or SMARTLINK. Moreover, it is fully Industry 4.0 compatible, enabling the Internet of Things and the digital integration of the air compressed system with other intelligent networked devices to improve equipment performance, enhance predictive maintenance and further increase energy efficiency.

Generating the power



Sales Representative Denise Olivier flanked by the President of Atlas Copco's Specialty Rental Division Ray Löfgren (left) and Rand-Air General Manager Louwrens Erasmus (right).

IN the 45 years since Rand-Air's inception, this compressed air and generator rental business has not only maintained a stringent focus on the quality of its products and customer service – but also the quality of the people who provide the critical interface between the company and its valued customers.

Further to these initiatives, Rand-Air – together with Atlas Copco's rental division – have devised a challenging MIRS (Master in Rental Sales) training programme which is used to develop promising talent in the organisation.

In 2017, an international MIRS training course was held, composed of 16 promising, high-potential sales engineers. Denise Olivier, a Rand-Air external sales representative based in the town of Kathu in the Northern Cape was selected to attend. Over a period of six months, she attended the four one-week MIRS training modules in Thailand, Belgium, Brazil and Dubai.

"It was a very intensive course, with a lot to take in and to put into practice. However, I have done so this year, and will increasingly benefit from this training as time goes by," explains Olivier,

who joined Rand-Air four years ago. She explains that the training has helped her significantly.

"It was a very intensive course, with a lot to take in and to put into practice..."

"This training is very practical, as participants gain knowledge in both 'hard' and 'soft' skills; which equipped us with all the right tools and knowledge to further boost our customer relationships and ultimately, our performance," she explains. Besides the essential skills and learning which they gained, participants were also tasked with reporting on their own personal development.

During the final graduation ceremony, each participant received an 18-month mission statement. New graduates who reach their targets will be invited for a fifth module, to take a 'next step' in their competence development.

Olivier explains that, based as she is in Kathu – a relatively remote branch in the Northern Cape – she has to be an all-rounder, ready to step in wherever she is needed.

Air solutions

ELECTRO Air, the Airstream Compressors (Pty) Ltd distributor for the Western Cape, offers total compressed air solutions with a comprehensive range of Airstream compressors.

Reciprocating compressors

Puma Power compressors from 2,2 kW to 15 kW, single or two stage are highly efficient industrial rated piston compressors, available with standard electric motors up to 15 kW and also diesel (9 hp) or petrol (6,5 hp) driven for clients who require heavy duty cast iron compressor reliability in the small to medium compressor range. Puma pumps are most suitable for general engineering and also the automotive industry where transportability, reliability and high

duty performance is mandatory.

Rotary screw

The Airstream oil injected rotary screw compressor range now offers users three options, catering for affordability and performance (7,5 kW to 400 kW) and ultimately for exclusive and unique energy saving, the PM & EPM range feature exclusive permanent magnet motor technology (7,5 kW – 110 kW). The new Airstream A series entry level fixed speed screw compressor range are designed for normal compressed air requirements, where the duty is for a regular nine hour shift averaging 2 200 hours per annum. The A range is supplied as stand alone, receiver mounted or Compact, supplied complete with receiver mounted, refrigerant

air dryer and comes standard with mineral lubricant and Schneider switchgear incorporating Star/Delta starting. These units are available from 7,5 kW to 75 kW to offer the best solution when users are seeking reliability at a reasonable price.

The Airstream SCR range offers heavy duty 24/7 performance for fixed speed or inverter driven compressors. Fixed speed units are supplied with highly rated Siemens switchgear and Invensys Vector Inverters for PM drives supplied as standard with long life synthetic lubricant, incorporating the Alywin German designed screw element. The SCR range has proved itself in the Cape region with several units running in major manufacturing plants, clocking up 40 000+ hours in their first 5 years of

duty without any problems.

Permanent magnet technology

Airstreams flagship models are the range of "Oil cooled Permanent Magnet motor driven air compressors" These units feature third generation variable speed technology, with tried and tested Vector frequency control. This atomically offers energy cost savings of up to 40% when coupled with permanent magnet motors, regardless of plant character or dynamics. There are no off-load losses, as these compressors are fitted with unique oil cooled Permanent Magnet motors - up to 75 kW - which will save power, constantly stopping and starting for optimum energy savings, as the motor exceeds IE3 ef-

iciency levels and IP65 standards. Units are capable of running in the speed range from 25% up to 100% randomly and they cannot overheat by virtue of the oil cooled design! The oil cooled Permanent Magnet driven compressor design has proven to be the most adept mode of compressor operation to guarantee tangible energy savings with total reliability. Its failsafe magnetic drive technology reduces electrical maintenance costs, unmatched by any of the current conventional variable speed air compressors available to the SA market. An Airstream PM or EPM compressor will pay for itself within 12 to 36 months by virtue of its inherent ability to constantly save electrical power and consistently operate at optimum efficiency.



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Containerised workshop facilitates on site-hydraulic services



The bolt-on canopy is used to accommodate the hose cut-off machine, which is normally situated outside the container in order to adhere to most mines' health and safety regulations.

HYTEC Services Africa (HSA), a Hytec Group Company, has launched its mine site-based containerised hose workshops to provide a comprehensive onsite hose and fittings service to its mining customers across Africa. Set up in refurbished and branded shipping containers varying in size from 20 to 40 feet, the workshops not only provide hose and fittings services, but also enable Hytec to supply its entire range of hydraulic services on a mine site – effectively functioning as an onsite mobile branch.

This new mine site services concept is unique to Hytec through the Bosch Rexroth expansion drive into Africa. This gives Hytec a distinct advantage over other companies, which generally only offer hose and fitting services. In order to provide an onsite end-to-end hydraulic offering, the workshop services include Hytec's hydraulic cylinder service exchange programme, as well as supplying new or providing services for pumps, filtration systems, drives, valves, piston motors and hydraulic maintenance tools. Additionally, as a value-added benefit, Hytec is able to control and stock other hydraulic components on request.

Workshop design

Depending on the requirements of the

mine and the urgency in providing services, Hytec can provide a start-up workshop with stock in very short turnaround times to ensure that hose replacement services begin the moment the workshop and stock arrives on the mine site. All workshops come standard with double side doors, 220 and 380 volt plugs with the plug design matching the destination country requirements; all electric; strip lighting; air conditioner; extractor fans; and shelving

to accommodate approximately 800 small stock bins and start-up hose stock. Start-up workshops are manufactured and readily available fully fitted in Johannesburg to ensure speedy mobilisation and delivery times. "The workshop configuration depends on the mine's requirements, explains Charlie Harrison, Africa Mining Services and Operations Manager, HSA. "Mines that require services beyond hydraulic hose and fittings may need ad-

ditional containers to accommodate filter, pump or cylinder stock. It may also be appropriate to add an office using a 20 foot container. Each container, and the configuration in setting up two or more containers, are custom-designed to each mine's requirements."

Hytec has already submitted a containerised workshop tender to a mining house in the DRC, with tenders for the same underway with mining houses in Zimbabwe, Zambia and Ghana. "Through the Bosch Rexroth Africa expansion initiative, full Hytec branch operations have been opened in East Africa Kenya, West Africa Ghana and we are working with Bosch Rexroth Morocco, which also covers Tunisia, Algeria and Egypt. This new mine site services concept will be developed in conjunction with all the Hytec operations in Africa," concludes Harrison.

Staying the course

FROM humble beginnings on 1 April 1993, with a staff compliment of only 14, to 1 April 2018 with a staff compliment of 550, Diesel Electric Services has been serving its customers and providing real value to our chosen markets for 25 ≥ years.

The company's success can be attributed to hard work, experience, customer service, open lines of communication, attention to detail, product innovation and manufacturing efficiencies to provide our customers with the highest quality products and services.

The company's diversification from only selling diesel generators to being able to offer turnkey electrical power generation solutions including the design, manufacture, testing, commissioning and after sales service of:

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- Voltage Stabilisers
- MV and LV Cabling and Reticulation
- Data Centre and Server Room Monitoring
- Manufacturing of MV and LV Switchboards
- Real Time Diesel Fuel Management / Monitoring
- Transformers
- Trailer Generator Sets – Trailers (≤ 10t)
- Bulk Fuel Tanks
- Hybrid Solutions
- Harmonic Filters
- Oil / Water Separation
- Motor Control Centres
- Photovoltaic Solutions
- Fuel Cleaning and

- Conditioning
- Fire Pump Sets / Dewatering Pump Sets
- Resistive Dummy Loads 10 kW to 1 200 kW

Being a socially responsible company means providing and empowering learners with skills development training to secure and implement a sustainable growth plan for the company.

Diesel Electric Services' training provider MTW investments (PTY) Ltd is a multi-disciplinary training provider offering a wide range of medium voltage 3-phase and basic electrical skills programmes, generic management qualifications, as well as general skills workshops e.g. maintaining stock control, team leader, customer care and software courses.

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- UPS's (Static / Rotary)
- Power Factor Correction
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- Data Centre and Server Room Monitoring
- Manufacturing of MV and LV Switchboards
- Real time Diesel Fuel management / Monitoring
- Transformers
- Trailer Generator Sets –Trailers (<10t)
- Bulk Fuel Tanks
- Hybrid Solutions
- Harmonic Filters
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Pump manufacturer now level 1 B-BBEE

KSB Pumps and Valves has become the first OEM pump manufacturer to obtain Level 1 B-BBEE certification. This follows the purchase of a 30% equity stake in the company by the black female-owned Insikazi Synergies (RF) (Pty) Ltd, a company with four business women shareholders including Nonhlanhla Ngwenya, Matshepiso Finca, who have joined the board to play an active role in steering the company in future.

Managing Director of KSB Pumps and Valves, Dr Sven Baumgarten, says, the deal is a first for the

multi-national KSB Group, a German company which operates through subsidiaries around the globe.

“...KSB... has grown to employ over 500 staff and a turnover of nearly one billion rand.”

“Achieving Level 1 B-BBEE Status has marked a significant milestone for us and is evidence of our philosophy of operating globally and thinking

locally. For us, transformation is not only a strategic imperative for operating in this market, but something we embrace as a company that will soon celebrate 60 years of operating in South Africa. We are proud to be the first pump and valve Original Equipment Manufacturer (OEM) to achieve Level 1 B-BBEE status.

“Our heritage in South Africa started in the 1920’s and since then has continued with manufacturing of high-quality products from our modern manufacturing, sales and serving facilities

across the country. Our evolving growth story locally is interwoven within the fabric of South African life and we are fully committed to transformation for the betterment of all.

“Over the years KSB Pumps and Valves in South Africa has grown to employ over 500 staff and a turnover of nearly one billion rand. We are poised for further growth in South Africa and in Sub-Saharan Africa and look forward to continuing our long and fruitful partnership with local business and Government,” Dr Baumgarten concluded.

Colab aids water resilience



IN the context of a partnership toward building a more resilient Cape Town, 100 Resilient Cities – Pioneered by The Rockefeller Foundation (100RC) recently hosted a Collaboration Workshop (CoLab) on Building a Water Resilient City. The CoLab was attended by international partners and experts, representatives from city governments, and other member cities from the 100RC global network, will take a cross-sectoral approach to building and identifying innovative and collaborative solutions and practices needed to bridge gaps endemic to highly complex, systemic urban issues.

This is the first CoLab to be run in Africa, building off of previous workshops on economic development, school infrastructure, and public transportation held over the past year in cities across Europe, South America, and North America.

The multi-year drought shock that Cape Town is currently experiencing is an opportunity to think more comprehensively about water system resilience and to catalyse change through introducing alternative, resilient pathways guided by sustainability. The CoLab drives innovation and identifies solutions toward fortifying the resilience of Cape Town’s water system and the city’s wider resilience for years to come.

“Cape Town has shown certain charac-

teristics of resilience during the drought, but much more needs to be done before we can truly regard Cape Town as a water resilient city. What the City of Cape Town and its people have achieved during the drought is remarkable, but we must ensure that the lessons we learnt during the drought are retained, and make us better prepared for future shock events,” said Councilor Xanthea Limberg, Mayoral Committee Member for Informal Settlements, Water and Waste Services.

“Cape Town is not alone: water-related hazards like floods, droughts, pollution, and related issues are increasing in frequency and intensity, impacting more than 80% of 100RC member cities worldwide,” said Liz Agbor-Tabi, Associate Director for City Resilience Delivery at 100 Resilient Cities. “The CoLab is a unique opportunity to explore how water ties into Cape Town’s larger social, economic, and political ecosystem – with the aim of fostering a stronger, more resilient city.”

Partners at the Cape Town CoLab included: Arup, Deltares, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, The Nature Conservancy, Swiss Re, Veolia, and WWF South Africa, with additional collaboration from the SA SDI Alliance and The Resilience Shift. Also

attending the event to contribute their cities’ experience were representatives from fellow 100RC members Los Angeles, Mexico City, and Addis Ababa.

The City of Cape Town is currently in the process of developing its first Resilience Strategy with support from 100 Resilient Cities. The City has launched its Preliminary Resilience Assessment, a robust analysis of Cape Town’s resilience opportunities and challenges. Findings reveal drought, rainfall flooding, unemployment, and substance abuse as top concerns among more than 150 thematic specialists consulted and over 11 000 residents surveyed in the months-long assessment process. Challenges incorporate one-time shock events as well as stresses that weaken the urban fabric on a day to day or cyclical basis.

“Water management is a crucial component of Cape Town’s resilience-building process, but it cannot be addressed in a silo,” said Gareth Morgan, Director of Resilience in the City of Cape Town’s Corporate Services Directorate. “Our city’s vulnerability to climate shocks has distinct implications for a growing population shouldering high rates of unemployment, poverty, and a lack of affordable housing. Although daunting, these challenges are also our greatest opportunities.”

UV Water Systems targets municipal markets

SINCE its inception in 1991, UV Water Systems has become a leading supplier of ultraviolet treatment equipment. UV Water Systems is a specialist UV supplier and market leader on the African continent, with systems operating in 24 different countries. The company is the exclusive supplier of atg UV Technology in Sub-Saharan Africa.

Key market areas of UV Water Systems are process and industrial applications. However in the past few years, UV Water Systems has seen growing interest in the municipal sector. While UV technology will probably still only be used selectively in the African municipal arena, the company believes that there will be a growing interest in the use of UV technology for treatment of municipal drinking and waste water.

UV disinfection is being widely implemented in the municipal markets in North America, the UK and Europe. For drinking water UV is being used for primary disinfection and as a secondary barrier disinfection – installed post chlorin-



Municipal atg UV system in South Africa.

ation – to specifically target chlorine resistant micro-organisms such as Cryptosporidium and Giardia. With independent 3rd party validation to the US EPA UVDGM, atg UV Technology’s UV systems will meet the strict requirements of regulators around the world.

UV disinfection is increasingly becoming

a standard final treatment stage in water treatment plants worldwide. UV Water Systems can offer atg UV Systems with closed vessel design that offer solutions using fewer UV lamps and having smaller footprints. UV technology is widely favoured due to its environmentally friendly, chemical free ability to

provide high log reductions of micro-organisms including Faecal coliforms and E. coli.

Due to water scarcity in some parts of the world and due to water losses that occur when discharging into the environment, re-using final effluent waste water for applications such as irrigation of crops, process water and more recently potable water, is now becoming a necessity for water-stressed locations. Using the independent testing and performance validation protocols of the NWRI, waste water can now follow the requirements of modern drinking water plants with assured disinfection performance.

UV Water Systems employs a team of dedicated professionals and offers full services throughout its market area. These services include site investigations, detailed system proposals, system supply and where required, installation, commissioning and integration services.

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Quality is no pipe dream

THE construction and plumbing sectors, together with authorities overseeing the installation of key infrastructure for the efficient and safe delivery of fresh drinking water and gas products, should never compromise on the quality of pipes and related materials. Yet, various studies have shown that around half of the plumbing materials used in South Africa are sub-standard resulting in wastage of precious fresh water and compromising the safety of consumers.

This warning was delivered by Charles Jerome, managing director of Rifeng Southern Africa, a specialist importer of plumbing pipes and fittings for distribution to wholesale, retail and export markets within South Africa, Angola, Namibia, Botswana, Zambia, Malawi, Zimbabwe, Mozambique and Tanzania.

With a head office in Durban, the company supplies easy-to-install, high quality PEX products and multi-layer composite pipe systems.

Charles Jerome pointed out that recent droughts around the country, failures in service delivery due to the use of sub-standard materials and pipe thefts continued to emphasise the challenges faced by those delivering potable drinking water and gas.

A major concern was the proliferation of poor quality pipes and components that were often used to cut costs and resulted in leaks and substantial water losses in buildings.

"Our products are made by the largest manufacturer of PEX in the world in five large production sites in China. They are backed by one of the largest global sales and support networks. We are committed to holding large stocks within our local warehouses in Durban, Johannesburg and Cape Town. We provide turnaround and delivery within 48 hours which means there is no need to compromise on the quality of materials due to a lack of availability," he adds.

Rifeng covers 80 countries. The five production facilities in China cover over 130 hectares and are home to 180 automatic piping production lines with a capacity of 2.3 billion meters of pipe per year. Products not only comply with South African legislation which stipulates that all plumbing and gas pipe components meet the specifications of the South African National Standards Bureau (SABS), but also adhere to global standards with over 50 certifications by international institutes

including Germany's DVGW. Products comply with a host of global standards, including AENOR, NSF, KIWA, STF, WRAS, Afrox and USA and Australian standards. Charles Jerome, says that Rifeng covers 80 countries and has invested extensively in research and development. Believing that innovation translates into productivity, it has set up two global research institutes, registered more than 560 patents and won 20 technology awards.

As a result, he says that Rifeng pipes offer excellent long-term rupture strength and are safe for daily use. They have a life span of 50 to 80 years with no corrosion and a guaranteed working life of 20 years. The company offers a 10-year system warranty on most systems and a lifetime guarantee on certain systems. "Our product is also half the price of copper with the same thermal expansion and NO theft value. Each joint is 100% guaranteed leak free. Pipes are easy to bend with no sleeving, soldering or flux required. Crimp fittings are made out of DZR brass and are high pressure and corrosion resistant. Crimp fittings can be recycled," he points out.

He says that all products are backed by expert training and installation assistance. "We believe all plumbers and installers should be recognized for their craft and supported."

15 Ml/day decentralised wastewater system unveiled

A recent presentation staged by Maskam Water – exclusive distributors and local manufacturers of the revolutionary Clarus Fusion Sewage Treatment system – celebrated the company's largest single unit supplied to the local market – a 15 000l/day unit that will serve a community of up to 100 people.

The decentralised Clarus Fusion Sewage Treatment System which features 50%+ local manufacture is the result of a joint venture between Maskam Water and licence holders, the Zoeller Pump Company of the USA.

Maskam's founder and CEO, Gerhard Cronje, outlined the advantages of decentralised wastewater systems and the differences compared with large conventional systems.

"The Clarus Fusion system is a grass roots product that is modular, easily expandable, simple to install and maintain, has very low energy requirements, can operate on solar power and recycles treated wastewater on site at less than R2.00/kl. Treated sewage can be re-used on site for non-potable applications.

"This radical but entirely appropriate solution addresses our and developing countries sanitation needs in formal, informal and remote rural areas" he said.

Local manufacture creates jobs – expands product capabilities

"The internal parts of the Fusion are imported in kit form from the USA" explained Cronje. "Shells are locally manufactured as are the electrical panels and piping used in the system leading to a local content of +50%".

Local manufacture substantially lowers the price compared to fully imported units, reflected in the number of units sold growing exponentially; sales of units in the first eight months of 2018 have already exceeded the total number of units sold in 2017.

The growth in sales has resulted in the creation of a number of permanent jobs in the manufacturing, sales, installation and servicing of these units.

"By adding accessories to the basic concept we cater for our local conditions while extending the product's capabilities and applications, thus offering a turn-key solution to our customers" he said.

Besides addressing the pressing issues of dignified sanitation to millions of people and saving billions of litres of water, the Fusion technology addresses two of the biggest problems with conventional and packaged plants - lack of maintenance and space.

The Fusion system

only requires sludge removal once every four to six years, and 1 hour of routine maintenance every six months, accomplished using semi-skilled labour. The low energy requirements of the system – typically between 60W for the smallest unit and 340W for the largest, can be supplied by solar PV.

On-site treatment and re-use of waste can eliminate the need to expand existing waste water treatment plants and given that the Fusion is installed underground, it can be easily incorporated in public open spaces, installed under walkways, etc.

The company have sold more than 230 Fusion units across sub Saharan Africa, the UAE and Mauritius since acquiring the distribution rights from Zoeller in 2010. More than 20 units have been supplied to customers in the Franschhoek valley, (where the first plant was installed in 2010).

As the system is modular, capacity increases can be accommodated by simply adding another unit, unlike conventional treatment plants which have to be constructed – at great cost – to cater for planned expansion at the initial stage, Fusion units can simply be added to accommodate demand as and when needed.

Although Zoeller's products are sold in



Dignitaries pose in front of the largest Clarus Fusion unit yet manufactured in RSA. From l to r: Jane Reddick – Green Cape, Gerhard Cronje – CEO Maskam Water, Western Cape Premier Helen Zille, Virginia Blazer, USA Consul General and Jason Meyer, International Sales Manager, Zoeller Pump Company.

over 50 countries, Maskam is the only company outside of Zoeller's home base in the USA, to be trusted to manufacture the company's products locally.

"On-site treatment and re-use is one of the most sustainable, if not THE most sustainable, way of saving water.

"The Clarus Fusion enables every person, every community and every business to treat waste water for re-use on-site.

That can save billions of litres of water per year. The same applies in the agricultural industry, where treated waste water can be used to top-up irrigation dams.

"Dignified, conventional sanitation can be offered to citizens in informal settle-


ments and low-cost housing as treated effluent can be used for toilet flushing without any need for costly infrastructure.

Furthermore, surplus treated effluent can be used for irrigation purposes" he advised.

Financing

Nedbank has agreed to financing the purchase of the Clarus Fusion WWTP to businesses on condition that the treated water be re-used, thus saving potable water.

Saving on the water bill will cover the monthly instalment, which means the customer is cashflow neutral. Once the system is paid for, the customer becomes cashflow positive.



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Moving sand slurry with ease



SAND slurry can be one of the most challenging pumping applications as the material being transferred is thick, abrasive and contains coarse particles that often form an unstable mixture.

Colin Adams, managing director of Integrated Pump Technology, says that sand slurries also often contain corrosive elements and sharp particles including stones which could result in excessively high wear with a dramatic reduction in pump life.

"Pumping sand slurry can be tough on pumps and it is critical that the correct pump be selected for this demanding application," Adams says. "Attention needs to be paid to the flow requirements and power calculations when determining which pump is most suited to an individual application. Most importantly, these sorts of pumping tasks require more power to operate than that required by a clean water pump."

Integrated Pump Technology has reported continued success with its Grindex Bravo pumps replacing vertical spindle pumps in

these applications.

Apart from the obvious advantage that a submersible pump offers over a vertical spindle pump such as its ease of installation, the innovative design of the Grindex Bravo range ensures minimal contact with the actual sand slurry being pumped.

Adams says that these pumps have been engineered to deal specifically with complex slurries, and have an integrated agitator system that allows the slurry to be placed into suspension for easier pumping.

"The majority of pumps do not have this feature and agitation therefore needs to come from an outside source increasing the cost of the installation as well as the maintenance required in that application," he says.

Commenting on potential increased wear in these applications, Adams says that the hydraulic components are made from N-Hard 4, one of the hardest materials available today. This ensures optimum wear life.

The Grindex Bravo pumps are engineered

to operate over the complete pump curve, not just on specific duty and can handle from 30 litres per second up to 130 litres per second at a maximum head of 45 m. The slim compact design facilitates quick and easy installation, while low noise level operation is another advantage.

Lower operating costs are also possible. These high efficiency pumps are known for reduced electrical consumption and as well as lower maintenance costs. An integrated pump starter protects the unit from dry run conditions and also allows optimum control of the pumping operation.

In addition, the unique Grindex "SMART" motor protection feature prevents pumps from single phasing, overheating and backward rotation.

The pumps incorporate an innovative hydraulics section with a closed impeller that reduces the performance drop sometimes caused by long term wear. The impeller is easily adjusted and this ensures stable dewatering during the whole life of the pump.

Effective stormwater management is crucial

EFFECTIVE stormwater management can prevent pollution, flooding, erosion and damage to the environment and infrastructure. Therefore, it makes financial sense for local municipalities to invest in products and technologies to ensure that the quality of infrastructure, be it stability and sustainability of both the built and natural environments is not compromised.

Storms and the resulting flood water can carry toxic particles such as oil, pesticides, pet waste, fertilizer and other such potentially threatening pollutants into local rivers, dams and municipal water services creating a breeding ground for diseases that could seriously affect the health of humans and livestock.

Rocla has been contracted for the supply



of pre-cast concrete stormwater pipes to numerous projects over the 100 years they have been in operation. Projects from Mozambique to Cape Town have utilised technical support and product quality that is associated with the Rocla range.

Rocla's Stormwater pipes with both interlocking and spigot and socket joints are available in a range of strength ratings. The spigot and socket joints

utilise the rolling rubber ring principal where no installation lubricant is required. All pipes conform to the SANS 677 standard.

After consultations with Rocla's technical team, interlocking joint pipes were selected for installation at the Great North Plaza in Limpopo, whilst the Borwa project in Westonia selected Rocla spigot and socket joint storm water pipes.

Technical support from Rocla ensures that correct product and technology is selected with consideration for the financial constraints of each project.

Rocla's entire product offering is manufactured to the ISO 9001:2008 standard at various plants throughout South Africa, Namibia and Botswana.

Rocla is part of the IS Group of companies which includes Techni-concrete and Ocon Brick.

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SA consortium to create value chains from biomass

THE South African Department of Science and Technology (DST) has established a biorefinery research consortium (BRC) to create new value chains from waste biomass.

The consortium is a partnership between the Council for Scientific and Industrial Research (CSIR), the Tshwane University of Technology, the University of the Witwatersrand, and Sekolong Sa Dimelana, a rural-based bioenterprise.

The objective is to identify opportunities for the beneficiation of waste by-products from forestry, timber, pulp and paper industries, such as sawdust, finding alternative and innovative uses for the waste and diverting it from landfills, the DST explained in a statement.

The BRC will use the recently launched R37.5 million Biorefinery Industry Development Facility (BIDF) at the CSIR's Durban campus.

According to the DST, in its initial phase (2018 to 2021), the consortium will focus on the revitalisation of the forestry, timber, pulp and paper industries. The BIDF supports innovation in a range of industries, including forestry, agro-processing and other biomass-based industries.

Currently, biorefinery technology in South Africa's pulp and paper industry is practised on a very limited scale. Most wood, pulp and paper waste ends up in landfill sites or is burnt, stockpiled or even pumped out to sea, the DST explained in a statement.

The Chief Director: Bioinnovation at the DST, Ben Durham, says the consortium was conceptualised with a strong emphasis on the full value chain approach, coordination and technology transfer, by providing broad access to technical expertise and the biorefinery demonstration infrastructure that the BIDF provides.

Cellulose nanocrystals

The BIDF has developed a novel process to produce cellulose nanocrystals (CNCs) directly from wood sawdust, without the need for the conventional pulping and bleaching processes that are currently used to isolate CNC from wood.

Cellulose nanocrystals are nanoparticles that have impressive optical, rheological and

mechanical properties comparable with stainless steel, and have widespread applications in the automotive, construction, paper, medical, food, environmental and industrial sectors, among others.

According to the CSIR chief scientist at

the BRC, Prof. Bruce Sithole, CNCs are high-value materials that currently sell for approximately US\$1 000 per kilogram. They are typically produced from high-purity wood-derived cellulose products such as microcrystalline cellulose, so

producing CNC from wood sawdust is an achievement.

The CNCs produced at the BIDF will be used by other consortium members for downstream development of various CNC-based products, such as high-performance

composites for packaging and construction applications, biopolymers for water filtration and biomedical applications, as well as biobinders produced from sawdust and castor oil.

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Out of the Ordinary

The uprising – it's a gas

NATURAL gas caters for approximately one-fifth of the world's total energy requirements. Food and beverage, pulp and paper, metals, chemicals, petroleum refining, glass, plastics and power generation industries account for nearly 40% of total consumption.

The recent discoveries of natural gas in Southern Africa, which includes trillions of cubic metres discovered in the Rovuma Basin off the Mozambique coast, have marked one of the most active periods for numerous energy reliant industries. The newly available gas is expected to spark an increase in Natural Gas usage, marking a new dawn for the Southern African energy landscape.

An opportunity for many

The increase in the availability of Natural Gas presents an opportunity for many industries to significantly increase profitability while reducing energy costs. In its effectiveness, Natural Gas provides a consistently high energy heat of +/- 39.22 MJ (10.89 kWh) per m³, this is an economically friendlier option than most fossil based fuels. Natural Gas burns cleaner than most fossil

fuels reducing stench; it improves equipment and plant performance and reduces maintenance by minimising the build-up of carbon residues within components, which reduces down time.

On par with government's green initiatives

Johannesburg, South Africa, is one of the first areas to benefit from the newly accessible Natural Gas network. This is being made possible through the development of a rapidly expanding gas distribution network by Virtual Gas Network a division of CNG Holdings. This is a road distribution method on a commercial-scale supplying natural gas in South Africa. The network is available to businesses anywhere within a 300-km radius of Johannesburg and will soon be launched in KZN.

Natural Gas is also an environmentally friendlier energy alternative, it emits lower levels of harmful emissions such as carbon monoxide, carbon dioxide, and nitrous oxides. It produces fewer greenhouse gases when compared to other fossil fuels. Due to that reason, the Virtual Gas Network (VGN) was enlisted to

convert the coal-burning boiler systems of 10 state-owned hospitals to cleaner natural gas. This move is part of the government's Green Initiative which encourages healthier energy alternatives.

Recognising the importance of reducing carbon emissions and foreseeing the benefits that a low carbon economy can bring, the South African government has committed to greenhouse gas emissions reductions of 34% by 2020 and 42% by 2025 through the introduction of the Carbon Tax Bill.

Natural gas will play a critical role in assisting companies to adequately revise their energy models in light of this Bill. Natural gas, which emits up to 27% less CO₂ and other GHG's than other fossil fuels, will play a critical role in allowing companies to maintain their production targets under a cleaner, healthier and effective energy dispensation. VGN has already converted canneries, hospitals, manufacturing and assembly plants across a range of industries, as well as taxi's, petrol and diesel fleets and warehouse forklifts in various storage and logistical applications to Natural Gas.

'Solar - a "just energy transition"'

THE global problem of climate change presents countries with the opportunity to improve their energy systems for the benefit of society and the planet overall. But labour unions, domestically and abroad, are worried that jobs would be sacrificed at the altar of environmental sustainability.

"The importance of balancing environmental objectives on the one hand and jobs on the other has been woven into the preamble of the 2015 Paris Agreement, which South Africa has signed," says Dominic Wills, CEO of SOLA Future Energy.

This principle is known as the 'just transition'.

"As one of the most carbon intensive developing nations in the world, South Africa needs considerable investment in renewable energy, such as solar and wind, in order to meet its international commitment of reducing greenhouse gas emissions," says Wills.

Locally, the 'just transition' principle forms part of the draft Climate Change Bill, recently published for public comment. The Bill supports the government's international pledge to reduce greenhouse gases.

In 2016, South Africa committed to "a long-term peak, plateau and decline trajectory" meaning carbon dioxide emissions would peak in 2025 before reaching a plateau and then declining.



The target also specifies an intended emission range up to the year 2030.

Wills says a reduction in greenhouse gases is one element of a just transition, adding that "the renewable energy sector must create value for society, which translates into accessibility, affordability, inclusion and job creation." The issue of ownership is vital to the discourse, so projects that rope in small power developers and communities are much-needed, he points out.

Globally, there are concerns that the labour intensive mining industry will be forced to shed jobs in the transition to a low carbon economy. However, a World Bank study predicts a rise in demand for minerals and metals needed to produce solar panels and wind turbines, should the international community stay on track to meet its climate change objectives.

In South Africa, the department of Trade and Industry (DTI) has emphasised the importance of the manufacturing sector for job creation. However, in typically energy-intensive processes such as textile creation, automotive manufacturing and agro processing, cheap energy is required in order to make these industries profitable.

"As the levelised cost of solar energy is much cheaper than coal, it has the potential to bolster the manufacturing sector, creating more jobs in the process", Wills added.

The South African government's Renewable Energy Independent Power Producer Procurement (REIP-PP) programme is in line with the country's commitments to the Paris Agreement.

"But, for these projects to truly create socio-economic value, they must empower home-grown developers and construction

companies," Wills explains.

He says the successful implementation of the Small IPP (SPP) programme, aimed at smaller scale projects with a focus on SMMEs, high black ownership and local supply chains is exactly what the renewable sector needs.

Independent Power Producers (IPPs) have reportedly created 35 702 full-time equivalent jobs and have spent R766 million on education, health, social welfare and enterprise development, according to figures provided by the ministry.

"Looking ahead, the potential exists for even greater localised ownership of projects similar to the Danish model of energy cooperatives where citizens are shareholders," he says.

"With good policies and political will, South Africa can work towards a fair and inclusive transition," Wills concludes.

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New

Xi series Compact autonomous spot finder IR camera

The newly developed Optris Xi 80 combines the benefits of infrared cameras and infrared thermometers.

A full 80x80 thermal image eliminates the hunt for the hot spot and tedious positioning required with single spot temperature sensors. The integrated spot finder function will identify the hottest (or coldest) spot in the image and automatically communicate these measurements without an external PC.



3 phase logging power meter kit

CAPE Mimics has released ENERTEQ™ by Meatrol® a cost effective handheld 3-phase power logging meter ideal for power efficiency surveys to solar or other alternative power installations.

It is supplied as a complete solution for power requirements that need network analysis. The ENERTEQ™ power meter characteristics are the measurements of currents and voltages including reports of real-time RMS values for all 3-phases and neutral. The power meter also calculates power factor, real power, reactive power and more. It can store between 1GB to 6GB of data on an SD card.

Voltage measurement accuracy is 0.2%

from 100V to 500V and up to 8 variables that can be logged with a sampling rate of 8k samples per second.

A big advantage is the use of Rogowski coils and their associated integrators. These are simply placed around cable cores without the need for disconnection. Current sensors are available from 100 Amp up to 6 000 Amps. The recorded data is measured and displays date & time, voltage (V), Frequency (Hz), PF (power factor), Active Power (W), Reactive Power (Var), Apparent Power (Va), Active Energy (Wh), Reactive Energy (Varh) and apparent Energy (Vah). All readings are displayed on a 3.5 inch qual-



ity colour TFT screen and comply with IEC 62053.

The kit contains: 4 x voltage wires, 1 x

power adaptor, 1 x 1GB DS card, a robust case, 3 x coils, 1 x power meter and 1 x USB-to-SD adaptor.

Expertise for the rail industry

AN international expert in railway design projects, AECOM's recent local track record includes clinching the bid to design, procure, and manage the construction and commissioning of the Dunnotar-based Gibela Rail Transport Consortium train manufacturing facility as the main Engineering, Procurement and Construction Management (EPCM) consultant.

Located near Johannesburg, the 50 000 m² manufacturing facility was constructed as one of its kind in Africa. Gibela aims to deliver 580 six-car electric train units comprising 3 480 coaches planned to revitalise commuter rail transportation in South Africa.

"This new manufacturing facility is a positive and proactive initiative to increase the volume of rolling stock available in South Africa, and to replace dated technology. It will contribute towards the country's capability to create jobs locally and reduce imports, with obvious exchange rate benefits. More importantly, it helps provide the local railway market with modern equipment," **Johan Venter**, AECOM Rail Market Sector Director for Africa, comments.

"A lack of skills and capacity are probably the main factors behind the rail industry being unable to contribute to its potential towards the development of South Africa, and also Africa. Often one of the main challenges is that decisionmakers are not sufficiently knowledgeable about the resources and assistance available to



Gibela aims to deliver 580 six-car electric train units comprising 3 480 coaches planned to revitalise commuter rail transportation.

them from professionals and experts," Venter highlights. These comments are from Venter's perspective of his involvement with the Gautrain Rapid Rail Link, which also had a strategic objective to grow rail technology development in South Africa.

Another critical issue is planned maintenance. Engineering covers everything from identifying needs and challenges to identifying optional solutions, assessing these solutions, selecting the best one, and then implementing it to be both effective and efficient. Once implemented, it is required to apply the same skill sets towards maintenance, operations, and management to ensure continued success. Projects often do not fully meet their strategic goals due to a lack of attention to operations and maintenance.

This is not as evident for railway systems, as they have long design lives and impacts are noted much later. However, insufficient maintenance is becoming evident in the

increased number of train derailments, train accidents, people being killed and/or injured and increased train delays and cancellations.

In addition, the railway network is not being extended to reach new development areas, while the popular and efficient high-speed railway systems found in most developed countries are not yet available in Africa. "A lack of rail engineering ultimately means that the quality of life for all is not improved to the extent possible, jobs are not created, economic growth cannot take place or is constrained significantly, with the effect that our people remain poor," Venter elaborates.

It is not all doom and gloom, though. Venter mentions that recent involvement in projects in South Africa – for example, the Gibela railway electrification, Majuba Rail, the Tambo Springs terminal, and the Gautrain, as well as a large number of opportunities in Africa – indicate that some important

decisionmakers realise there is, indeed, a light at the end of the tunnel if railway development can be used to promote job creation and economic development.

"As a country, we have to make inroads in attracting private-sector investment in long-term projects such as rail. We should all put shoulder to the wheel to get the economy to grow. Investing in large feasible infrastructure projects such as new railway lines will contribute significantly towards job creation and economic growth," Venter concludes.

Top-end Ctrack solution fitted to Time Link Cargo fleet

CTRACK's telematics solution has provided Time Link Cargo, with a full range of services, including visibility of who and what is being transported in their trucks at any given time.

The Ctrack solution also enhances safety for Time Link Cargo's drivers and provides additional security for the company's supply chain operation. It consists of an advanced fleet management tracking unit, integrated cameras on trucks and trailers, an in-cab routing device, jamming detection technology and trailer tracking.

Time Link Cargo's immediate need was for complete security of their trucks and loads, primarily due to both the value of cargo transported and the length of time spent on the roads.

Since deployment, Ctrack's camera surveillance solution has given the long-haul transporter the 24-hour visibility it was looking for via three cameras inside each truck: one in-cab, one



Kamal Mitoo (Marketing Director) and Kashmir Mitoo (Financial Director) of Time Link Cargo.

forward-facing and the other at the rear of the vehicles.

Ctrack's integrated camera solution includes real-time video reporting, snapshot and video remote search and video downloads of incidents via Wi-Fi. It makes it possible to corroborate details of accidents, and give trusted accounts, recordings and

snapshots before, during and after incidents.

Furthermore, Ctrack's fleet monitoring software, jamming detection devices and wireless trailer tracking systems have assisted in combating hijacking. This has given peace of mind to Time Link Cargo drivers, especially while moving through high-risk areas.

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The danger of pinch points

What are pinch points?

A pinch point or nip point is any point at which it is possible for a person or part of a person's body to be caught between moving parts of a machine or between the moving and stationary parts of a machine or between material and any part of the machine. At least one moving part of the machine must have a rotary or circular motion. Typical nip points include gears, rollers, belt drives, and pulleys. Machines with pinch points include metal-forming machines, power presses, conveyors, robotic machines, powered rollers, assembling machines, plastic molding machinery, printing presses, powered benders, press brakes, power transmission equipment, powered doors, covers, and hatches, including such generally unrecognized hazards like overhead, powered garage-type sliding doors.

Guards and devices

A guard to isolate the worker from the pinch point is the most common form of protection in OSHA's standards. OSHA has also recognized that protection from pinch point accidents can be provided by what it calls devices. These items will stop the machine if a hand or any body part is inadvertently placed in the danger area; restrain or withdraw the operator's hands from the danger area during operation; require the operator to use both hands on machine controls; or provide a barrier that is synchronized with the operating cycle of the machine. Machine stoppage can be achieved by

multiple means, including photoelectric (optical) or radio frequency (the machine stops when its capacitance field is interrupted).

Engineering controls

- Guards. If you purchase a machine that does not come equipped with a guard, install one. Contact the manufacturer of the machine to see if appropriate guards are available for the equipment. Guards should always be designed and installed by technically competent and qualified persons. Have the equipment manufacturer review proposed guard designs to ensure that the guard will adequately protect employees and allow safe operation of the equipment.
- Ways to guard. The choice of guards is determined by the design of the machine, the manufactured material, the work being performed, and other factors. All moving machine parts that may cause injury must be safeguarded.
- Securing guards. Workers should not be able to easily bypass, remove, or otherwise tamper with the guard.
- Durability. Guards must have adequate strength to resist blows and other operational stresses.

Work practice controls

- Training. Workers should understand the purpose and function of all con-

trols on the machine, should know how to stop the equipment in an emergency, should be trained on the safety procedures for special setups, should know the circumstances under which the guard should be removed (usually just for maintenance), and what to do if the guard is damaged or not functioning properly. Employees should be able to demonstrate their ability to run the machine with all safety precautions and mechanisms in place.

- Inspection. Inspections should ensure that the operator and the machine are equipped with the safety accessories suitable for the hazards of the job, the machine and safety equipment are in proper working condition, and the machine operator is properly trained. Inspections should be documented and records maintained.
- Use the guards. A worker should not be allowed to operate a piece of equipment if the guard or any other safety device is not functioning properly.
- Shut off the machine. Workers should know never to leave a machine that has been turned off but is still coasting.
- Housekeeping. Keep floors and aisles in good repair and free from debris, dust, protruding nails, unevenness, or other tripping hazards. Make sure the floor is non-slip.

MSA Africa launches latest Bluetooth-enabled hearing protection

MSA Africa has introduced Bluetooth technology into several product groups in its Personal Protection Equipment (PPE) range, such as hearing devices. This latest development in technology enhances health and safety even further in dangerous working environments such as underground mining.

Bluetooth is a wireless technology standard for exchanging data over short distances, using short wavelength UHF radio waves in the ISM band from 2.4 to 2.485 GHz, from fixed and mobile devices. A Bluetooth product contains a small computer chip with a Bluetooth radio and software.

When two Bluetooth devices want to speak to each other, they first need to be paired up. One common application is to stream voice or music from a phone or tablet to a wireless audio headset or hands-free connection in a car. Until now, connected items have been part of our daily personal life. This trend is now entering the world of PPE.

There are three different categories of hearing protection. Passive ear muffs are the most commonly used, offering mechanical attenuation, and containing no electronics. This solution is suitable for applications where there is no need for communication, or a critical need for awareness of the surrounding environment.

Active hearing protection supports the wearer in many situations such as when they need to communicate with co-workers, or need to hear environmental sounds crucial for safety. Here MSA's CutOff technology allows for awareness of surrounding sounds, as the sound is reproduced inside the ear muff with an adjustable gain.

However, in some applications, workers need to communicate in a very noisy environment with the client or the back office. People working alone while operating noisy equipment, such as underground mineworkers, need to remain



The left/RIGHT WW with Bluetooth and AUX input socket helmet-mounted version, with enclosed adapters to fit various helmet models.

connected in order to receive incoming communications from a team-mate or foreman.

Connected hearing protection such as MSA's new left/RIGHT Wireless World (WW) technology meets this particular need. With its integrated Bluetooth function, the hearing protection can be connected easily to any compatible mobile phone or Bluetooth radio. Incoming calls can be received while working in noisy environments, and while staying protected, with a safe sound level in-

side the ear muff. For optimal performance, highly-efficient microphone filters eliminate surrounding noise for the caller.

Two product configurations are available, namely left/RIGHT WW with Bluetooth and AUX input socket and left/RIGHT WW Dual with CutOff environmental sound function and a built-in FM radio tuner. The left/RIGHT WW products are available as a headset version or helmet-mounted version, with enclosed adapters to fit various helmet models.

Solar wireless alert kit

CAPE Mimics now offer a solar charged wireless alert system which is ideal for outdoor perimeter detection.

Wireless detectors connect to a compact portable receiver with a built-in alarm that gives off a warning. The user can identify a breach in 3 different zones by the number of different beeps (each zone can have 4 detectors linked to it).

There are two versions:

The first system is Mini-kit, with an economical initial installation and includes three solar detectors, a receiver and two remotes

which are used for activation.

The Mini-kit can be used to produce an instant alarm system and is perfect for carports, fences, other types of detections and applications. It can also be linked to an existing alarm if required.

The second system is full-featured alarm system with both wireless and wired detectors, a control box and siren.

These two systems are compatible and the user can start with a mini-kit and later link it to a full alarm system if they so desire.

The main advantage



is ease of installation, cost saving of wiring, portability and flexibility of the solar detec-

tor. For more information call Anje Fouche 021-551-8185 or email anje@mimics.co.za

Lighting up the situation

SWAT law enforcement flashlight's strobe effect allows security and law enforcement officers to shine a light on criminals or dangerous individuals in low light or dark condition. It is robust enough to withstand any amount of man-handling. The unit is easy to operate with five mode settings and deliver 900 lumens on full power.

The SWAT flashlight has rechargeable Lithium-ion batteries with

an alternative power source option which makes use of normal disposable batteries. This means that you need never be in the dark! It has a military spec casing and a super strong aluminium alloy body which makes it impact resistant when dropped from a height of 1,5m.

It's weather resistant and the 100 000 hour lifetime Cree 10 watt LED means that this flashlight's lifespan is

a lot longer than conventional globes. The SWAT's built-in energy management system also gives it longer battery life.

All round, you'd feel pretty secure in buying the SWAT flashlight, knowing that it's effective in compromising situations, strong enough to last the night and, importantly, it's good value for money as it's such a quality product.

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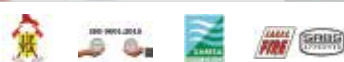
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Ready for inspection

QUALITY inspection is critical in all manufacturing and packaging lines, especially in the Food and Beverage sector. Being able to catch a defective product before the products are shipped can bring significant savings in both time and money, preventing expensive product recalls, wasted production and potentially expensive legal costs.

For perishable products, quality inspection of the packaging is also critical. In 2008 the Consumer Protection Act was implemented to prevent exploitation or harm to consumers by regulating the way in which businesses interact with consumers, and market their products and services. Packaging and labeling must now adhere to certain standards. Food Labeling Regulations (R146) was also introduced to standardize labeling and to ensure all food and



beverage manufacturers adhere to the same standards laid out.

As production lines become ever more automated, inspection and quality control also need

to be more automated. Automated systems can improve a line's effectiveness, by performing tasks quickly and accurately. However, the real benefits only

truly materialize when 'smart' automation is implemented; utilizing such features as smart data. When this is applied to vision inspection systems, defects can be spotted and dealt with swiftly with minimal impact to the line.

The importance of quality control

This is especially true in the Food and Beverage industry where the effects of defects reaching the public domain can be far-reaching, affecting everything from consumer health to brand confidence.

Governments are enforcing ever tighter restrictions on package markings, especially in the food and pharma sector. For example, in South Africa R146 was implemented to ensure that the food and beverage manufacturer's in SA complies with the international standards.

All present and correct: Omron system solution

Whether providing a complete system solution or a partial upgrade to an existing system, each component is geared towards ensuring the highest quality control. For inspection and quality control Omron's very compact visual inspection units monitor production in real time and respond instantly to any defect.

Data sent from the vision system is processed locally and sent via the cloud for powerful analysis that allows the system to take appropriate actions. The system is totally interlinked, with the improved connection between machines in a manufacturing line delivering more accurate quality control and higher efficiency. If any error is detected, the system can often compensate automatically, allowing production to continue

unaffected. Omron's smart automation solutions are very fast and possess lots of processing power, yet they are easy to use. This combination of speed, intelligence and user-friendliness delivers the most effective inspection and transparent quality control.

Following the rules

For an inspection system to be able to make smart decisions, it needs to collect data from a sensor, such as a vision camera. Vision cameras can be set up to monitor different aspects of the product, perhaps to check for imperfections, or to check labels for misprints or missing information. Powerful processing then analyses this data to monitor the process, comparing actual results with expected results. If any problems are found, the system follows pro-

grammed rules on how to respond to any changes.

Flexibility, now and in the future

In addition to catching production errors and reducing waste, a further advantage of an effective inspection and process management system is flexibility. By combining vision, motion, control, safety, and robotics, all in a single management system, such as Omron's Sysmac Studio, production lines can readily accommodate short production runs and adapt to market demands. Line set-ups can be changed quickly for new production runs, and the recognition pattern for quality inspection can be updated easily in the software. This ensures different variants or even different products are produced and packaged correctly.

Laser engraving technology arrives

THE recent introduction of laser engraving technology boosts Thermaspray's comprehensive range of services and gives the coating technology specialist the capability to offer a complete end-to-end solution to the printing and packaging industry.

The company is a market leader in the refurbishment of worn Anilox rolls to extend their life cycle and also offers coatings of new rolls. "Historically, we prepared the rolls at Thermaspray and then sent them off to a company for laser engraving," explains Thermaspray Managing Director, Dr. Jan Lourens. "However, we now offer an in-house laser engraving service. In addition to acquiring a large top end laser engraving system, we have also appointed a laser engraving specialist and industry recognised expert, Dean Govender. His

reputation as a specialist in this technology has earned him respect throughout the printing industry both locally as well as in other parts of Africa."

The addition of laser engraving to Thermaspray's manufacturing, refurbishing and coating capabilities gives the company the edge in offering a complete package all under one roof at its fully equipped facility in Olifantsfontein, Johannesburg. As a locally based company, customers can expect faster lead times and a more cost-effective solution compared to imported Anilox rolls.

The German-manufactured, 600 Watts fibre optic laser has an engraving capacity from 100 to 1 200 lines per inch. Ink in flexographic printing machines is transferred via laser engraved microscopic cells on to the Anilox roll or An-

ilox sleeve. "Our system can perform laser engraving on a variety of materials including ceramic, polymer as well as ebonite rolls. We also offer glue applicator rolls which, using the same principle, transfers glue or starch instead of ink to the substrate," confirms Dean Govender. He adds that Thermaspray can also engrave sleeve Anilox rolls, explaining that the engraving is done on the sleeve. "Compared to Anilox rolls, sleeve Anilox rolls are lightweight and the latest technology available on new printing machines."

The Laser Engraving machine can handle rolls between 50 – 500mm diameter and 100 – 3 000mm in face length meeting customers' varying requirements. The machine is equipped with multi-beam technology which speeds up the engraving process. But

Govender is quick to point out that the time is determined by the cell count, volume and depth required.

The complete refurbishment process offered by Thermaspray on a used roll starts with inspection and a full analysis to determine how much wear has occurred and if the roll is suitable and cost effective for refurbishment.

Once the roll has been approved for refurbishment, it is prepared for pre-grinding, grit blasting, bond coat and ceramic top coat application is followed by precision grinding and polishing. The roll is then laser engraved and polished. A specially formulated sealer is applied to the finished roll to improve ink evacuation from the microscopic cells.

A Troika Anicam microscope is then used for quality control on the laser engraved roll

to ensure the correct cell count, depth, and volume. According to Govender, quality control is critical to ensure consistent ink transfer across the roll face which is verified by the internationally used Troika Anicam. "All engraving data is captured and stored on the Troika Anicam software. We are able to provide certification reports to our customers on each individual roll, giving the customer proof of the engraving quality and specifications requested."

As the PC-based Troika microscope is portable, Govender is able to inspect the quality of a roll directly on the printing press at a customer's premises. Govender also conducts periodic inspections and roll analyses on site to determine when a roll will need refurbishment or cleaning. Predictive maintenance can deliver sub-



stantial cost savings for customers as it prevents poor print quality, critical failures and subsequent unplanned and costly downtime. The roll can be removed and sent for refurbishment during planned maintenance without affecting production.

Govender advises that regular roll inspection and maintenance is the smart thing to do as it is imperative that the correct roll is selected for a particular print job. Regular maintenance assists in extending roll lifecycle thereby minimising the need

for frequent changing of rolls which is a time consuming task resulting in many hours of lost production. The periodic maintenance reports generated by the Troika Anicam enable Govender to determine the approximate end of roll use. In this way the customer also gets the maximum use of the roll. In addition to advice and customer support, Govender also offers customer training on correct roll maintenance to extend the life cycle of the product and improve print quality.

Introducing Laser Engraving at Surcotec

Surcotec provides high-quality, specialised laser engraving on anilox, seamless polymer and ebonite rolls.

We specialise in the manufacture of new anilox rolls as well as the repair and refurbishment of worn or damaged rolls. In addition our high density, low porosity wear resistant ceramic coating extends the service life of these rolls.

Surcotec offers a one-stop-shop service for clients in the laminating, label printing, flexible printing and corrugated packaging industries.



Western Cape floor refurbishments

A.B.E. Construction Chemicals supplied a combination of products for the upgrading of the flooring at two premises in the Western Cape: the Supa Quick tyre and fitment centre in Robertson, and Sea Harvest fish processing facilities at Saldanha Bay.

Johnie Emmerich, a.b.e.'s flooring consultant in the Western Cape, says for the Supa Quick project, the company supplied the following products to a.b.e.-approved flooring contractors, Walrus Coatings:

- abescree SLC P;
- abecote primer; and
- abecote 441.

After the contractors had completed extensive vacuum grinding of the 600m² existing flooring at Supa Quick, a 3 to 5mm thick coating of abescree SLC P was applied. "abescree SLC P is a single-pack, rapid hardening cement-based screed for self-levelling floors, ideal for situations where quick setting is essential. The product can be used on new floors or for smoothing floors in office buildings, private homes, shops, public buildings, schools, hospitals, airports, prisons, factories, workshops and warehouses," Emmerich explained.

He says the screed has many benefits including the fact that



a.b.e. flooring products were used for the upgrading of the concrete floors at the Supa Quick fitment centre in Robertson in the Western Cape.

around 2 000m² can be pumped per day; it can be walked on after only two to four hours; it can be pumped or hand-laid; and it also will not harbour bacteria.

The floor surface was then sealed with a.b.e.'s abecote primer before two coats of abecote 441 was applied as final coating.

abecote 441 is a protective and decorative coating that can be applied to concrete, steel and timber surfaces. "The clear material is non-toxic when dry and resists solvent stains – essential for a motor workshop. The coating will also not chalk, and has excellent water resistance," Emmerich adds.

In another flooring project in the Western Cape, a.b.e. provided the necessary products for the refurbishment of 400m² of concrete

flooring at the Sea Harvest operations at Saldanha Bay.

For this project, carried out in-house by Sea Harvest, a.b.e. supplied abeflo epoxy which was applied after mechanical grinding and the application of abecote 337 as primer.

"abeflo is a four-component, solvent-free, self-levelling system for flooring which caters for high hygiene standards, and offers good colour retention and a medium gloss finish. The system has been successfully applied for flooring of hospitals, schools, showrooms, supermarkets, canteens, restaurants, laboratories and a wide variety of situations where hygiene was a major priority. For a food processing facility such as Sea Harvest, this was particularly important," Emmerich explains.

SAPMA slams government apathy

GOVERNMENT'S apparent lack of concern about the dwindling number of qualified coatings technologists in South Africa is a matter of grave concern, warns Deryck Spence, executive director of the SA Paint Manufacturers Association (SAPMA). Spence said the coatings industry is plagued by a serious shortage of skills in research and development, exacerbated by the fact that the relatively few paint chemists operating in South Africa are now near retirement age. "Despite this ominous scenario, which has been spelt out to government by

SAPMA repeatedly for many years, the training authorities are currently more obsessed with the qualification as paint applicators by the thousands of jobless people," he stated. Spence said SAPMA fully supported the concept of job-creation at low skills levels but in declining to provide grants for the training of technologists to advance the industry, the training authorities clearly overlook that without technology there would not be paint to generate an income for applicators. "Coatings technologists are essential. They contribute to the assessment, develop-

ment, reformulation, quality, maintenance, and enhancement of products through planning, executing, and analysis of experiments. Green building calls for sustainable and non-polluting manufacturing processes as well as products that do not release harmful compounds into the atmosphere or water. Without qualified and experienced technologists, the coatings industry would not have been able to comply with many of the stringent laws now in place the world over." Spence said paint was often simply regarded as a decorative coating but - through techno-

logical research - coatings had contributed revolutionary scientific advancements of global benefit.

"Overseas, paint chemists developed the formulation of a top coat one hundred times thinner than the human hair. When applied to the body of a jet aircraft, for example, the reduction in drag saves millions of dollars in fuel and flight scheduling.

"Technological research in the UK has developed paint that conducts electricity that is now spawning substantial interest from governments as well as the building industry.

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Climate not to blame for California fires

Continued from back page

to make them worse in size and intensity.

But the culprit is the way forest is managed. Fire in forests is natural but by introducing livestock, and systematically fighting fires before they have run their course, forest floors become choked with vegetation. Add drought to the situation and the perfect tinder awaits a spark to cause a runaway fire of an intensity Na-

ture never intended.

That is not the opinion of some sceptic on the theory of climate change caused by human activity. It's the considered view of a director of the Association for Fire Ecology in the US.

As for the loss of human life and the destruction of homes when these high intensity fires now take place, there are

really only two solutions.

They are stopping building of homes in forests naturally prone to fires, and radically changing the way forests are managed.

The huge fires in California and the Mediterranean have nothing to do with emissions of carbon dioxide or a change in the world's climate.

Economic policy is the problem

**Fanie Brink – Independent
Agricultural Economist**

“THE economy will not recover as long as the ANC continues with its socialist and communist political and economic systems that destroy economic growth and prosperity.

Therefore, a short-term stimulus and recovery package will not make any difference because economic growth is a long-term process that must be based on economic principles,” says independent economist, Fanie Brink.

Brink responded to President Cyril Ramaphosa's announcement of the government's economic package to try and stimulate the extremely bad economy.

The big question, however, is how this

package will be financed because there is no room for higher state income and loans to finance the budget deficit which will significantly increase the state's debt burden and plunge the country into a huge financial risk. Greater regulation of the economy and higher government spending will be very detrimental to the economy if it is to be funded by higher taxes.

Unfortunately, the government has long passed the point over which Margaret Thatcher, former British Prime Minister, said that “the problem with socialism is that it eventually runs out of other people's money.”

“With its ideology, the ANC government will never understand that economic growth in the world is driven and created by the profit motive based on the principles of a capitalist economic

system.”

The government's responsibility is to establish an economic policy environment that will make it possible for every industry to make a greater contribution to economic growth by improving their profitability, but the government is engaged in exactly the opposite policy actions which is implemented through greater interference in the market and regulation of the economy.

“Socialism and communism can only destroy economic growth and prosperity which has decades ago been clearly proven and therefore totally rejected worldwide.

The total return to a capitalist economic system is the only way how economic growth is being created worldwide, says Brink.

President Ramaphosa's agenda undermined

**By Gerhard Papenfus, Chief Executive
of the National Employers' Association
of South Africa (NEASA). He writes
this in his personal capacity**

AS reported by Bloomberg, President Ramaphosa recently urged businesses to play a part in reducing rising unemployment, to “try everything they can to avoid retrenchments, and in a way put a moratorium on retrenchments so that (South Africa) can rise from these challenging economic conditions.”

This call by the President and the dire situation South Africa finds itself in, especially as far as unemployment and its socio-economic consequences are concerned, is yet again simply ignored by South Africa's Steel Federation (Seifsa) and the trade unions in the Steel Industry. Their response to the President's call is to request, with the assistance of in particular NUMSA, the Minister of Labour to extend their 2017-SMME hostile agreement to the rest of the Steel Industry.

Since 2010 the extension to non-parties of all Seifsa's SMME hostile agreements were either set aside by the Labour

Court or, by means of successful urgent applications, prevented from being extended. In one particular matter the extension was referred to as a ‘sham’, while in another matter the presiding judge remarked that they simply ‘don't learn’.

They obviously don't. The fact that Seifsa has proved themselves to be South Africa's worst collective bargaining negotiator, and notwithstanding the fact that the whole of Seifsa represents a minuscule 10 percent of employers in the Steel Industry, does not deter them from attempting, with the help of the trade unions and the Minister of Labour, to impose their devastating agreements on the rest of the Steel Industry.

The fact that the manufacturing sector, with the Steel Industry being the main culprit, has lost 105 000 jobs in the first quarter of 2018, does not in any way cause Seifsa to realise that they are primarily to be blamed for this job blood-bath. They negotiated entry level wages for the Steel Industry 40 percent higher than the second most expensive industry, and 45 percent higher than the third most expensive industry governed by collective bargaining. This is a track record to be ashamed of.

Seifsa's irresponsible SMME hostile conduct manifests also in the fact that:

- their big employers are mainly situated in the Gauteng industrial complex, and to a lesser extent Cape Town and Durban, where drastically different economic and operational circumstances prevail, compared to that in rural areas; and
- the cost of labour as a percentage of turnover is up to ten times higher for a small business than a big business.

For eight years NEASA was successful in protecting the Steel Industry against Seifsa's self-serving onslaught against the Industry's SMMEs.

We will not let up on this fight. NEASA is currently in the process of preparing an urgent application in the Labour Court to prevent, not only Seifsa's ill-conceived agreement to be enforced on an already struggling Steel Industry, but to protect South Africa against the socio-economic consequences of the immediate job losses which will follow should the Seifsa hostile agreement be extended to non-parties.

Dealers endure economic headwinds in 2018

NEW vehicle sales for September were down 1.9% year-on-year with a total of 49 670 units sold according to the latest aggregate sales data from the National Automobile Association of South Africa. From a year-to-date point of view, total industry sales were on par with the first nine months of 2017, coming in marginally lower at -0.8%.

Looking specifically at the dealer channel that accounted for 78.6% of new vehicle sales in the industry, total unit sales were down 2.3% year-on-year. Retail consumers have felt a pinch in their wallets because of a combination of economic factors such as price increases from manufacturers due to the weakening rand, the VAT hike in April and on-going fuel price increases.

It is worth noting, however, that total new vehicle sales through the dealer channel have remained relatively strong, showing an increase of 1.9% year-to-date.

“Economic headwinds are likely to persist and cause continued strain on the automotive industry. However, we are encouraged by new vehicle sales though the dealer network that increased 0.9% month-on-month and 1.9% year-to-date,” says Ghana Msibi, WesBank Executive Head of Sales and Marketing. “As we enter the final quarter of 2018, we remain hopeful that our prediction of 0.75% total industry growth can still be achieved, but not without some challenges.” Rentals sales increased significantly in September at

20.1% year-on-year, but remained subdued at -3.6% year-to-date.

“The increase in rental sales is a seasonal trend seen this time of year as rental companies gear up for the pending holiday season,” says John Loxton, WesBank Executive Head of Fleet Management and Leasing.

The passenger and light commercial vehicle segments, which contributed 66% and 29% to the total market respectively, are down by 0.3% and 2.4% year-to-date.

The remainder of the commercial segment including buses, medium, heavy and extra-heavy vehicles was up 2.3% – though this combination has made up a relatively small 5% of the total industry so far in 2018.

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CAPE Business News

Chairman:

Rudi Leitner
rudi.leitner@hypenica.com

Publisher:

Pieter Meiring
pieter.meiring@cbn.co.za

Editor:

Robin Hayes
editor@cbn.co.za

Production Manager:

Elise Jacobs
elise.jacobs@cbn.co.za

Online Editor:

Minè Vermaak
[mine.vermaak@cbn.co.za](mailto:mينة.vermaak@cbn.co.za)

Sales Team:

Heather Ferreira
heather.ferreira@cbn.co.za

Robin Dunbar
robin.dunbar@cbn.co.za

Shaun Austin
shaun.austin@cbn.co.za

Subscriptions:

subscriptions@cbn.co.za
Cape Business News

Tel: 021 2500400

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Trump moments in white and black

As usual, nothing much was happening at the local Pub & Grill. Cassandra the Canine has had her stroll and was now occupying some real estate at my feet in leisurely relaxation, oblivious of Jon the Joker's insults. He would simply have to go around.

The Knights of Knowledge (they sit around, drink beer and know things; that's what they do – to coin a phrase) were contemplating matters unfathomable to the casual observer. Talented pub hostess Angela the Angel had filled all glasses in use and The Governor looked smug and convivial.

This serene scene was very rudely disturbed by Luke the Dude, with no malice aforethought to be fair, tipping his draft over into his lap. That would have been okay, had he not also jumped up, flinging the glass against the wall and loudly invoking the ghosts of all his forefathers.

Or that's what we thought his expectorations meant. He could speak Tswana from his childhood in the interior. The big dog had jumped up in alarm and taken refuge outside the door, from where she stood barking at Luke.

For a long moment we all stared in stupefied silence. Then Jon the Joker and Big Ben broke out in giggles. And the next moment we were all laughing uproariously at the Dude, sitting there dumbfounded, trying to look as if he had nothing to do with it.

Irene the Queen took pity on him. "Don't worry Lucas," she mothered, "it's okay. We'll have it cleaned up in no time. Angie, would you find me a mop, please? And the rest of you, please calm down and behave. There's no need to laugh so rudely at poor Lucas. He's already embarrassed enough."

The kitchen staff were rushing in to do the cleaning up, while the frowning Governor tried to mutter something about the cost of glasses, but Stevie the Poet quickly cut him off with a reminder that he received all his labelled pint glasses for free from the brewery.

Luke the Dude had in the meantime recovered his senses and discovered a need to rescue his pride. "Thank you, Irene, thank you, but there's no need to do that," he proclaimed, "our friends here were not laughing at me, they were laughing with me!" That resulted in a further riot of laughter, competing with the first for rudeness.

"Keep going, Boyo," encouraged Colin the Golfer, "this joke's even better than the one with the glass!"

"See!" nodded Luke the Dude, looking around approvingly. "I meant to raise a laugh there and now everybody is having a good time! We are just having fun."

"What do you mean," frowned The Governor. "You mean you broke my glass for a joke? To be a funny man?"

"Of course," confirmed Luke the Dude, then reconsidered. "No, of course not. I mean ... Angie! Please pour me another glass, I didn't like that one."

"Hmmm. A funny man," pondered The Governor. "Let's see how funny it is when you have to pay for the damages ..."

So, we all laughed again – until even The Governor smiled and Luke the Dude had convinced himself that he had not made a fool of himself.

"That was quite a moment there, young Lucas," The Prof resumed when order returned. "A triumphant moment maybe not, but certainly a Trump moment."

"Yes, yes, yes!" agreed Luke the Dude, momentarily quite flattered.

"What do you mean?" enquired Bob the

Book.

"I don't know if you saw Pres Donald Trump's performance when he addressed the United Nations last month," continued The Prof, "Well, there he was, sincere face on, stacking up his usual pack of lies about his own greatness. About how his presidency was doing better than almost any other in American history. Step aside Washington, Jefferson and Lincoln, the champ is Trump!"

"Merde! The chump he is Trump!" heckled Jean-Jay in his quaintly Gallic manner.

The Prof took no notice, having dealt with students for many years: "The economy grows faster than ever; unemployment is lower than ever – the two go hand-in-hand, but not in the world of Trump. There they are separate achievements giving Trump double bragging rights. No mention, of course, of the fact that the US economy has been growing for the past ten years – eight of those pre-Trump – to reach its present levels. No facts will go unadulterated in the world of Trump."

The great white hound was resettling in front of me, keeping a suspicious eye on Luke the Dude, who was sipping from another glass.

"What does all of this have to do with Luke?" asked Bob the Book.

"His reaction to the laughter, that's what," replied The Prof cryptically.

"Any other glasses need refilling?" hosted The Governor in a friendlier manner, directing Angela the Angel to knights responding in the positive.

"Please do elaborate, Prof," Bob the Book insisted.

"Well, it's like this," spoke The Prof, "many of the world's leaders were gathered there at the UN, listening to Trump. In general, they are informed people who understand how governments work and that Trump is a braggart and a liar. So, when he went off again as if he was addressing the ignorami who are his voters, they laughed at him. First some giggles and then outright laughter."

"He responded first with 'So true ...' and then with 'I didn't expect that ... but it's okay'."

"Afterwards the media asked him about making a laughing stock of himself in front of the world's leaders – they did not use those exact words – and he denied that anything of the kind happened. His version of the 'truth' was that he had made a deliberate joke, to evoke laughter and that he was very pleased with the outcome."

"Still later he claimed that they were all just having a good time. And in the world of Trump, that is what happened. Never mind that every other world leader present and everyone who watched the TV footage remembers it differently."

"Well well," nodded Bob the Book, finally satisfied. "That certainly takes 'saving face' to a whole new level. And you think that's what Luke the Dude did?"

"Not to the same extreme, of course, but it was indeed a Trump moment: the laughter, the embarrassment and the attempt to explain it away. However, young Lucas showed none of Trump's bluster, Trump's arrogance or Trump's attempts at bullying others to accept his 'version'."

"On the contrary, what Lucas did, was nothing more than human nature. And by now I am sure he accepts that we did have good reason to laugh at him."

Luke the Dude looked around the bar and saw only good-natured smiles. "Well ja," he said, "I guess it must have been

pretty funny."

"Watch that glass!" shouted The Governor in mock alarm. And then we all laughed again.

"What is not funny," The Prof interrupted, "is that our own president had a Trump moment too, at the same UN gathering. He said, to the news service Bloomberg and in response to Trump's tweet about looking into farm murders and land grabs in South Africa, that 'there are no killings of ... white farmers' in South Africa and that 'there is no land grab' in South Africa."

"Dr Frans Cronjé, CEO of the Institute of Race Relations, reacted better than I can: 'Ramaphosa's comments are offensive to the victims of farm murders – black and white – and to the millions of South Africans who live with insecure title to the properties they occupy. Retreating into

OPINION

ON THE CONTRARY



Pieter Schoombie

the realm of fiction will not help to break the political and economic impasse that has been triggered by the government's attempts to dilute property rights."

The Prof folded his arms in conclusion: "I'd rather not comment on the attempts to justify the president's utterances."

E-mail: noag@maxitec.co.za

Climate not to blame for California fires

FEW things excite headline writers and television news producers more than a wild fire burning its way towards homes. It's bad news and bad news attracts readers and viewers.

And nothing gets the man-made climate change alarmists more excited than warnings of imminent doom that the media parade on such occasions, usually when news is thin, readers depart on holidays in warmer climes and European TV viewers are baking themselves on the Spanish Costa del Sol.

August is fire season in Mediterranean climes in the northern hemisphere. On cue as always happens at this time fires break out. Most of them are natural and essential for germination of plants adapted to fire over millennia.

Some are large and we are told they are getting larger. But if they are what is the reason?

Climate alarmists see the headlines and pictures as proof of their theory that emissions of carbon dioxide are the cause. Sceptics with a knowledge of history dig deeper. What they find tempers the alarms.

For example, in California the records show an average of some 30 fires a year throughout the 70 years that records have been kept. Some of the biggest ones were reported in newspapers even earlier long before climate alarmists hooked their wagons (and their research grants) to the carbon dioxide theory.

According to the California Department of Forestry and Fire Protection the largest wildfire ever recorded was one that burned 130 000 hectares in 1889.

The deadliest fire was 1933. It killed 29 civilians and 15 fire fighters. One earlier in 1923 destroyed 640 buildings, 584 of which were homes.

The facts are that forest fires are a regular feature of places like California and, although it is arguable, they do seem to be getting bigger and lasting longer even in the opinion of California's National Park Service, an organisation that should know

THE OTHER SIDE OF THE COIN



Keith Bryer

what it's talking about.

But it places the blame, not on the climate but on the way forests are managed. This creates thick layers of undergrowth rather than allowing them to burn naturally as a result of lightning strikes.

"We are living right now with a legacy of unnatural fire suppression of approximately a century," a forestry expert has said. It is an opinion supported by a University of California Berkeley University study.

It concluded that "National parks and other protected areas clearly provide an important function in removing carbon (dioxide) from the atmosphere and storing it... But we also know from previous research that a century of fire suppression has contributed to a potentially unsustainable build-up of vegetation. This build up provides abundant fuel for fires."

Forest fires are natural. They are a necessary part of the ecosystem. Their ashes feed the soil and for some plants are even vital for germination.

Fires clear the undergrowth, let the sun in and allow native species to grow. They kill weeds, control diseases and knock out insects that damage trees.

Healthy trees survive forest fires and grow faster after fire opens up the canopy to sunlight. Recovering forests attract animals too.

Another set of scientists have proved this in a long term experiment. They took two 9 hectare pieces of forest. In one they ensured it did not burn. In the other section Nature was allowed to take its course and endured regular but small burns.

They reported that in the protected patch plant diversity was only a tenth of the burnt patch and some birds disappeared altogether.

It is not noted in newspaper accounts of large fires that in the US almost all wild fires are put out. However it is also true that pouring money into firefighting seems

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