

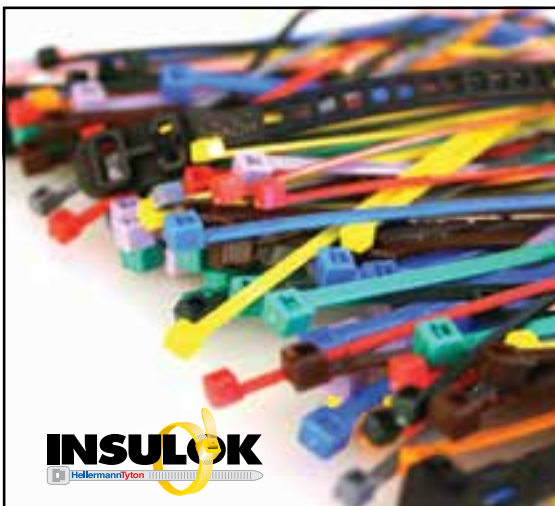


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Kelvin's generating capacity boosted



Marthinusen & Coutts' divisional CEO Richard Botton and senior artisan Shepherd Chigwa inspect the 60 MW generator stator at Kelvin Power Station prior to its repair. Over the past 18 months, Marthinusen & Coutts and ACTOM Turbo Machines have performed a comprehensive range of repairs and refurbishments for Kelvin Power Station in Kempton Park. Marthinusen & Coutts re-

cently completed a complex repair of one of the station's 60 MW synchronous alternators, while ACTOM Turbo Machines performed general overhauls (GOs) on five 60 MW turbine generator sets. This work has contributed towards boosting the aging station's generating capacity from 120 MW to 300 MW.

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NBCEI team on a winning streak

IN less than six months the 'crack team' from the National Bargaining Council for the Electrical Industry (NBCEI) has notched up unprecedented successes in its quest to rid the electrical industry of pirate contractors.

The ECA(SA) national director, Mark Mfikoe, who also wears the hat of the NBCEI's acting secretary general, says the team has registered 1 235 previously unregistered employees of registered electrical contractors and 'pirate' contractors.

Mfikoe says another 377 cases are in the legal 'pipeline' awaiting arbitration awards – and once these have been upheld, the NBCEI team will execute them "quickly and decisively" to purge the industry of non-compliance."

Mfikoe reveals that, in the course of the NBCEI team's official visits to this country's construction sites, the "single largest non-compliant employer" that the team found had 103 unregistered employees. "They have all now been registered and are in good standing."

He says the team found another five firms that collectively had 228 unregistered employees."

Continued on page 3.

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Personality of the Month

Incentives are great motivators



Barend Niemand.

BAREND Niemand, chief executive officer at the Comtest Group has been with the company since it started 10 years ago and has been a major part of its success. When Comtest's chairman, Peter Verwer, retired in February this year, he knew without any doubt that he could place the company in Barend's capable hands.

Barend's philosophy is to be humble and thankful and to do everything he does to the best of his ability – and to grow and secure the company as a major player in the market.

His 'hands on' management style means that he knows when to give his staff the space to do what needs to be done and when to roll up his sleeves and get involved.

When he isn't structuring relationships with partners and clients, he's raising Nguni cattle in the Tondeldoos/Roossenekal area of Mpumalanga where he also enjoys outrides with his family on his 'Boerperd'.

Sparks: Where were you educated?

BN: I matriculated from Welkom Gymnasium in the Free State Goldfields and then went on to study accounting sciences at Unisa and, after I had done my articles, I obtained a B Compt degree (part-time) in 1992. In 2003, I finally completed the Executive Development Programme (EDP), also through Unisa.

Sparks: How long have you been involved in the electrical industry?

BN: I started in this industry in 1993 – so it's going on for 25 years.

Sparks: When and where did you start your career?

BN: I started out as an audit article clerk and, after I had completed my articles in 1992, I started my first job as financial manager at Fidelity Acoustics in Pretoria, a leading importer of high-end audio products.

Sparks: What are the greatest changes you have seen over the years?

BN: I started as financial director at Comtest back in 2005 when Peter and Val Verwer started the company. I've seen a lot of positive changes over the past 10 years as the company has grown from having just eight staff members to over 60 employees on the pay roll today.

Technology has changed enormously in a decade and instruments have become smaller and more powerful. Today, with the correct instruments, you can do more work with less labour – and achieve better test results, which all add up to a more profitable business.

Sparks: What major projects have you worked on

and what is your greatest accomplishment?

BN: Starting from scratch at Comtest was a major project for me and my greatest accomplishment was when I signed up Comtest's first acquisition – Instrotech and DPM Instruments.

Sparks: Have you won any awards?

BN: Just 'Dad of the Year'. Seriously though, I'm usually the quiet 'bu' in the background, although last year, Comtest did win the Best Website award for our export region.

Sparks: Who has been your inspiration or have you had a mentor who has influenced your career?

BN: My father, Ben, has been the biggest influence in my life; he taught me the value of commitment and integrity. In my career, I am hugely grateful to my colleague of 20 years, John Wilson, for his continued mentorship, which has been invaluable.

Sparks: What, to your mind, are the biggest challenges facing the industry at this time?

BN: The political environment in South Africa right now is very challenging. The predictions about the future of this country's economy are discouraging and it's a major challenge to remain optimistic. However, I do believe there are still a lot of opportunities but one would have to remain positive, focused and work hard in order to achieve success.

Sparks: What do you enjoy most about your job?

BN: I enjoy the dynamics of working within the electrical industry and I get a great deal of satisfaction out of providing excellent products and first-rate service. It's also very satisfying to see how effective our sales teams are in the market and to hear positive feedback from clients on how our products have saved them money or that our

products have saved peoples' lives. Safety must always come first. Another hugely satisfying experience was when Comtest installed the Neotel and InfraCo fibre network system of over 20 000 km of fibre-optic cable.

Sparks: How do you motivate your staff?

BN: I believe in the recognition of employees' accomplishments and that incentives are great motivators.

Sparks: If you could 'do it all again', would you change anything? If so, what would that be?

BN: I am happy with what I have achieved and I have no doubt that if I had to do it all again, I wouldn't change anything.

Sparks: Would you advise a person leaving school to enter the electrical industry? And why?

BN: I would definitely advise school leavers to seriously consider a career in the electrical industry. I see a lot of opportunities for people who are prepared to work hard and who want to make a difference.

Sparks: What is your advice to electrical contractors and/or electrical engineers?

BN: The most important advice I can offer is to buy quality products. Do the job once and do it well; and don't ever compromise on safety – yours and everyone else's.

Sparks: What is your favourite quote?

BN: "With God there is no problem that is too big to overcome."

Sparks: Name three things on your 'bucket list'.

BN: I would like to spend some time in the Serengeti National Park; I'd like to experience the Northern Lights with my family; and take them on an extended tour through the countryside in France and Italy.

NBCEI team on a winning streak

Continued from page 1

These numbers are huge when taking into consideration the industry average, which is currently at seven employees per company. And when this is seen in the context of the electrical industry's standards, we're talking about this country's top employers. To put this into perspective, a company with 100 permanent employees generates around R120-m per annum, so this represents a huge percentage of the market share," explains Mfikoe.

He commended the NBCEI team, which is currently being led by Sifiso Nhlapo, for its outstanding work, which is done under challenging conditions.

"The team's performance has been so effective that a new NBCEI office has been opened in Rustenburg, which will significantly increase the council's reach into North West Province. Pirate contractors – and those who use their services – will find that the space in which they operate is becoming very limited," warns Mfikoe.

"The team has reported that some companies have instructed employees to run away when they see the team approaching," says Mfikoe, "but they can't hide forever."

He reports that the NBCEI team in KwaZulu-Natal has registered more than 500 employees and it is confident of further success.

Mfikoe appealed to "the above-board industry players and clients" to ask contractors to produce proof of employees' registration with the NBCEI and the Department of Labour or "pay the price when things go wrong".

"Of course, others may escape the net and some pirates might be able to avoid the team for a while but the team is relentless in its pursuit for a clean industry," says Mfikoe.

"This team's efforts are bolstered by the support it receives from the industry and I appeal to the unregistered employees of non-compliant companies to come forward with information – for the greater good of the electrical industry."

Anyone with information for the NBCEI team can call Sifiso Nhlapo on (011) 339-2312.

Mfikoe stressed that Nhlapo will take all leads seriously. "There is no room for apathy – this team will follow up with action and bring offenders to book."



Mark Mfikoe.



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Working knowledge by Terry McKenzie-Hoy

Sound walls – white noise, pink noise and sound barriers

THE control of noise is very much a matter that falls under electrical engineering. I've lost count of the number of times that I've been asked: "Can't you just have something like a sound blocking wall that will generate sound and then stop at the sound coming into a space?"

I wish something like that existed because then I would make a lot of money.

All noise has an associated 'perception' of that noise – but there are ways of reducing peoples' perceptions of noise. The best example that I can think of is the young couple who stroll down the beach, very much in love. Years later, they remem-

ber that stroll with great affection. What they don't remember is that the sea and the waves breaking on the shore made sounds that would not be acceptable in a factory environment. But their perception of the noise was that it didn't matter.

The ways of reducing perception of noise are electrical in nature and involve the generation of electrical signals. Probably the most misunderstood is noise masking. This is also known as 'white noise' generation. This involves the generation of a hissing noise through loudspeakers, which are mounted in the ceiling of an office. If people are talking some distance away, then a listener has

two noises to listen to: the hissing sound and the sound of the conversation. The ear of the listener regards these as the same and then 'tunes them out' so that they are not disturbing. White noise masking is popular because it is easy to make electronic hissing noises; and you can use very low quality loudspeakers. Thus you can charge a client a lot of money for a cheap installation.

The problem with masking white noise is that it contains a whole lot of noises that don't mask anything. These noises create stress and the result of the white noise installation is that it is exhausting to many employees. Better results are obtained

if the hissing noise is not 'white noise' but rather 'pink noise'.

One would think that noise is just noise but this is not so. White noise is the noise of a un-tuned television set. Pink noise is the sound of the wind, a waterfall or the sea. Technically, pink noise has a frequency spectrum such that the power spectral density (energy or power per Hz) is inversely proportional to the frequency of the signal. White noise has a constant power spectral density. But really, who cares?

White noise sounds sharp, pink noise sounds soft. It just so happens that the masking effect of noise does not require sounds at a many different frequencies. Tests have shown that a signal, which is centred around 400 cps (i.e. Hz) with a bandwidth of no more than 90 cps does the job. But this is effectively the sound of a buzzer and it is very annoying and, consequently, much wider signals are used.

Noise can be cancelled out. These days there are 'noise cancellation headphones' available that record the noise outside the headphones and feed it back into the headphone and thus into the ear – slightly delayed – which causes the noise in the headphone (and thus the ear) to be greatly reduced. Such headphones cost as little as R1 500 and are far better than industrial earmuffs.

I want to side-track a bit: if something is 'theoretically possible', it means that there is no mathematical reason why it cannot happen. Thus, theoretically, you can fit a tractor into a bubble-gum bubble. The bubble-gum just has to be strong enough. However, you cannot make a square bubble-gum bubble because it is mathematically impossible.

Bearing this in mind, I can tell you that it is theoretically possible to make a noise wall such that you can have a very loud sound and it will be inaudible at a certain boundary. The implications of this are huge. It means that you could have a diesel generator out in the open that would be completely inaudible. You could have jet engines taking off all the time while you, on the other side of the noise barrier, wouldn't hear them.

It is possible. Just not with today's technology, right now.

Three-step energy management system launched

SCHNEIDER Electric has announced the local availability of a Smart Panel system that will assist in fostering sustainable energy savings in small to mid-size buildings, such as public and commercial offices, retail premises and hotels.

Founded on Schneider Electric's energy management principle of 'measure, understand and save', the Smart Panel is an easy-to-deploy solution that addresses the urgent need to cut energy costs and meet regulations for green buildings.

'Measure and collect' is the first step, with the automation of energy consumption metering at source. Over the last decade, Schneider Electric has revolutionised low voltage switchboard technology to produce the Smart Panel, which is intelligently embedded with metering, control and communication capabilities. It not only simplifies daily operations, but also eliminates the traditional error-prone manual data gathering. The second step, 'collect to understand', is enabled by the Energy Server Com'X 200, a smart data logger that gives timely and secure access to the consolidated energy data.

As facility managers need access to energy analyses to execute the third step, 'understand and save', Schneider Electric says that its StruxureWare Energy Operation service helps deliver energy savings and identify areas for continuous energy efficiency. As a cloud-based Software-as-a-Service (SaaS) solution, Energy Operation is cost-effective and users have access to the tailored-to-audience reports from anywhere and at any time for informed actions in order to meet energy goals.

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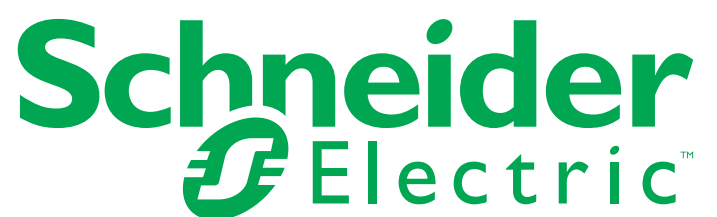
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ECA News by Mark Mfikoe, national director of the Electrical Contractors' Association of South Africa

Labour-only sub-contracting – a prohibited strategy in the electrical industry

LONG before the legislature decided to interfere in the 'fictitious' independent sub-contractor arrangements that were a part of the South African commercial space, the negotiating parties in the electrical contracting industry, meeting as the National Bargaining Council for the Electrical Industry (NBCEI), had taken a firm step regarding labour-only sub-contracting.

This practice is when a major contractor procures the services of an entity to do work that would ordinarily have been done by his employees at an agreed rate for work completed.

Payment for such work is paid to the labour-only service provider and this entity pays the people who actually did the work. Even though this practice is prohibited in the electrical industry, many large contractors have used such services, seemingly oblivious to the dictates of the 'Main Agreement of the NBCEI' as gazetted from time to time.

What makes labour-only sub-contracting attractive is that the client contractor does not get robbed of productivity. Margins can, at the very least, be sustained and, at best, improved.

Directly employed labour earns a right to income by making themselves available to perform work. All they need to do is present themselves to their employer at an agreed time, for an agreed duration of time (normal time) and for that the employer owes them money – or they have earned an income as defined in their employment contracts.

It is up to management to ensure that such time is spent advantageously (from a profit making point of view) for the firm. In other words, management must manage these resources

within the time available to ensure that the company gets to earn more than it is spending in line with predictable speeds and quality according to its tender.

The costs are guaranteed but not the productivity. The liability is known but the income must be managed to carry the liability and deliver the required margin. In the case of labour-only sub-contractors, the client pays for work done and not for time spent on the job or the cost of such time to the sub-contractor.

It does not matter whether this job was done on a public holiday, a Sunday or at night. Only two things are taken into consideration: The quantity installed at the agreed standard rate.

To this end, many a client contractor has simply sub-contracted portions of their labour to the labour-only sub-contractors and, in some instances, the whole contract would be sub-contracted.

If the commercial terms are that the labour-only sub-contractor would be paid a certain amount per light fitting point, the client would simply count the number of fittings installed and multiply this number by the agreed rate to pay the labour-only sub-contractor. In this manner, skilled labour can be used quite cheaply to compete with others who employ labour directly.

Clause 40 of the Main Collective Agreement – Prohibition Of Contract Work On A Labour-Only Basis, provides as follows:

No employer shall

(a) Avail himself of the services of another person for the supply of labour to perform work covered by this agreement on any basis which provides for such remuneration, benefits and allowances to be paid to a person other than the person performing such work; and

(b) In respect of work covered by this agreement, pay remuneration, benefits and allowances to a person other than the person who, in terms of this agreement, is entitled to such remuneration, benefits and allowances.

My view is that this provision, which existed in the industry when I joined some 17 years ago, is harsh. This is exposed further by Clause 41 of the Main Agreement, which allows for labour brokers to function in the industry and register with the Bargaining Council.

It does not make sense that labour-only sub-contracting faces a total ban and labour brokers who do not participate in any risk – in effect trading with people – are allowed to operate.

Labour-only sub-contractors are very useful to limit productivity and commercial risk and protect margins. These take a risk of their own as they need to perform at better than agreed speeds to deliver profits to themselves. It is a win-win situation.

The labour-only sub-contractor makes money and so does the main electrical sub-contractor.

Obviously the sub-contractor would have to be paid standing time in instances where his labour is available and the main electrical contractor frustrates productivity as in instances where there is material shortage.

An absolute prohibition of labour-only sub-contracting constrains business and forces it to operate in a clandestine manner. We should find a way of registering such contractors with the Bargaining Council to ensure that profitability is not achieved through exploitation, which includes non-contribution to social benefits that are compulsory for all employees in the industry.

At the same time, we must find a way of embracing this manner of doing business for the labour-only sub-contractor and his/her clients.

There is no question that, even though the definition of 'Temporary Employment Service' in the latest amendments to the LRA includes sub-contracting of this nature, labour-only subbies are morally far better than labour brokers, who basically are involved in human trade.

Labour-only sub-contractors participate in risk and contribute positively to the speed of productivity and quality of installations. Prohibiting them will continue to drive them underground. This matter will be 'in the package', which is to be negotiated by the ECA(SA) when the new Main Agreement is negotiated in 2016.

Eliminate damage caused by load shedding

THE managing director of BFR Digital, Bruno Jones, says the ongoing power crisis has impacted on all South Africans. And, according to Minister of Public Enterprises, Lynne Brown, "load shedding will be with us for at least another three years".

An expensive 'side-effect' of load shedding is that appliances and industrial and commercial equipment are being damaged.

Jones explains how the damage is caused.

"When the power is switched on or off, the contactors used by Eskom

can create switching transients with peak voltages up to 20 000 V that last between 10 and 100 micro seconds," he says.

"Another problem that is created when contactors are switched on is electromagnetic interference or EMI. The amount of EMI generated can easily cause equipment to malfunction and the life span of most equipment will be shortened by prolonged exposure to EMI."

He says a third type of damage could be caused by any 'inductive load' in the factory, office or home.

"An inductive load could be, for example, any ac motor or transformer: when the current flow is interrupted across an inductive load this will lead to a sharp rise in voltage – a back electromotive force (EMF). This EMF is a source of transients and EMI that can cause damage to other equipment on the circuit," he explains.

"Most traditional surge protection devices (SPDs) connected to electrical distribution boards offer protection against transients. SPDs are specifically designed to protect electrical equipment from lightning, however, a new product is now needed to protect electrical equipment from load-shedding. At BFR Digital, we've designed a device that performs this function," says Jones.

This device is a three-in-one product offering:

- Surge protection in three modes – live-to-neutral 60 kA; live-to-earth 60 kA; and neutral-to-earth 60 kA.
- Electromagnetic interference suppression and frequency attenuation.
- Back EMF suppression.

"Only by eliminating all three risks



can you prevent equipment from being damaged," he says, "and this includes expensive UPSs that run mission-critical equipment."

More information is available on the BFR Digital website:

www.bfrdigital.co.za.

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SCHNEIDER Electric's solar powered portable LED lamp with mobile charger, the Mobyia TS 120S is an energy efficient, eco-friendly and robust portable lamp producing 120 lumen light output.

The lamp is equipped with a mobile phone charger that includes a USB port. It features three brightness settings providing up to 48 hours of lighting with one day of solar charge. The seven simple usages allow the lamp to be hand carried, hooked to a ceiling, mounted on a wall, placed on a desk, fixed on a bottle top and carried on a pole. The Mobyia TS 120S superior battery technology – Lithium Ferro Phosphate battery – delivers high performance for more than three years.

The micro-controller based charge controller ensures efficient solar charging, prevents over charge and deep discharge. Smart electronics for battery monitoring shows indications for battery charging, battery charge level remaining and recharging when drained. The patented design has won Grand Prix, Strategies Du Design 2013 and European Design awards. The Mobyia TS 120S is available from Schneider Electric distributors at under R500 (excluding VAT).

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Anti-rust coating seals in savings

AN easy-to-apply and environmentally-friendly corrosion protection solution for non-porous surfaces – RustPrufe – removes the need to repair damage to steel surfaces that occurs during extended storage periods or shipping and handling.

The solution is available through wear control specialist, Filter Focus. COO Craig FitzGerald says that RustPrufe is a painted or sprayed-on acrylic polymer emulsion that dries "to form a seamless, skin-tight weather and UV-resistant protective barrier".

He adds that motors, valves, gears, and shafts are often subjected to harsh climatic conditions, and RustPrufe is a durable, cost-effective and user-friendly option that protects these costly components.

"RustPrufe is acid-resistant and has been successfully used to protect electric motors in acid plants on numerous South African mines," he says, adding that the solution is also utilised in the fertiliser industry where it is applied to earthmoving machinery to protect the equipment from nitrates that corrode metal.

Another advantage of this product is that components do not have to be sanded down or rust treated.

"When RustPrufe has been applied, the product is peeled off by hand to reveal a clean and rust-free surface. As a result, cost savings during routine maintenance and repair shutdowns are significant," he says.

Unlike traditional tape, wax and oil coatings that have to be scraped off and cleaned with solvents, RustPrufe does not leave any residue. Should any tears or perforations appear, these can be sealed by simply applying the solution to any exposed areas with a paintbrush.

As the product doesn't contain any harmful chemicals, there are no harmful fumes and the solution can be applied in confined spaces without personnel having to wear personal protective equipment (PPE).

"RustPrufe is environmentally friendly and, with zero toxicity, the coating can be safely disposed of in landfills," FitzGerald concludes.

Enquiries: +27 11 466 1268

Expanding into the DRC



DEHN's new office in the DRC will be managed by Job Midiburo.

DEHN Protection SA has expanded its African footprint by establishing its first satellite office in the Democratic Republic of Congo (DRC). Based in the capital, Kinshasa, through this office, the lightning and surge protection experts will be able to service local and global organisations located in this massive francophone market. Given the DRC's large size, ongoing electrification and climate, there is high demand for reliable and efficient surge and lightning protection, and safety equipment. In fact, central Africa has the highest lightning density in the world, making this a crucial market for the company. From its base, DEHN will be able to serve a broad range of organisations including utilities, power, telecommunications, mining, public sector and non-governmental organisations (NGOs). The new office will be managed by Congolese national, Job Midiburo and, with his extensive technical background and hands-on product knowledge, he will be offering the full range of DEHN products to the Congolese market.

Enquiries: +27 82 414 4633

Mobile charging with external power pack

SCHNEIDER Electric has introduced the APC Mobile Power Pack range of high capacity, high efficiency external battery packs to local shores.

The APC Mobile Power Pack is designed to provide mobile charging for all smartphones and tablets – or any device that can be charged using a USB cable. The new lightweight external batteries enable a greater range of apps to be used for longer periods, including energy sapping applications that use location services and GPS.

According to Bruce Grobler, IT Business director for southern Africa at Schneider Electric, the APC Mobile Power Pack is designed to ensure that users can utilise their apps when they need them – whether that means being able to download e-mail and documents, tweet or upload pictures and videos.

"We all need more battery life at some time or other, either at home, on our travels or at work. The APC Mobile Power Pack allows users to get more from their mobile," he adds.

The APC Mobile Power Pack external battery packs come in two sizes: M5 (5 000 mAh) and M10 (10 000 mAh). The smaller M5 weighs in at 142 g and measures under 108 mm x 65 mm x 15 mm, packing enough energy to charge the average smartphone twice.

M5 weighs 243 g and measures under 147 mm x 89 mm x 14 mm, it provides one full charge for a tablet or four smartphone charges.

Available in a contemporary high key gloss white or black finish, the APC Mobile Power Pack looks right at home alongside today's stylish smart devices. It incorporates Lithium Polymer battery technology, which can be charged twice as many times as Lithium Ion equivalents, to ensure a lasting and reliable working life.

Externally, the APC Mobile Power Pack provides two output USB connections allowing two devices to be charged simultaneously, and a four-LED battery capacity indicator.

The battery packs are charged using a supplied micro USB connector; charge times are typically four hours (M5) and eight hours (M10). Both external batteries are remarkably efficient at storing charges and can be left in laptop bags, handbags, rucksacks and the like for weeks on end with no significant energy loss.

The APC Mobile Power Pack can be depended upon to get devices up and running reliably. The M5 and M10 work by charging the device's inter-



nal battery in place of a mains electricity supply.

Schneider Electric has also built-in important protection features to ensure long and safe operation of the APC Mobile Power Pack. Grobler says that many low cost external batteries on the market do not incorporate controls to protect against common problems such as over-charging, over-discharge or over-temperature.

"Such conditions could result in premature battery degradation or over-heating.

APC Mobile Power Pack's Protection Circuit Module (PCM) guards against issues arising as a result of all of the above, as well as cell over-current, USB over load or short circuit, and ultra-low dark current," says Grobler.

Enquiries: +27 11 254 6400

New version of lightning protection handbook released

FOR three decades, the lightning protection guide from DEHN has been the trademark for practice-oriented technical literature in the fields of lightning and surge protection for buildings, installations and systems. Over time, the book has been revised and enlarged, due to changes in standardisation and technical advances. Now the third revised edition of the English language lightning protection guide is available.

The lightning protection guide – almost 500 pages – provides expert knowledge for the practical understanding of lightning and surge protection. Topics include characteristic lightning parameters, the practical application of lightning protection components and surge protective devices as well as state-of-the-art technology and recommendations based on the IEC and EN 62305 standards. Wherever no international or European standards exist, reference is made to pertinent German standards.

The book includes materials, components, devices and systems, standards, regulations, design fundamentals and 34 practical solutions for specific applications. Informative illustrations



additionally explain the function of lightning and surge protection systems and show possible application scenarios.

The lightning protection guide gives non-specialists and experienced experts an overview of normative, technical and practice-relevant aspects of lightning and surge protection and offers support in the selection and sustainable design of buildings, installations and systems.

The *Lightning Protection Guide* can be directly obtained from DEHN and is also available as a pdf document at www.dehn-international.com.

DEHN is represented locally by DEHN Africa.

Enquiries: +27 11 704 1487

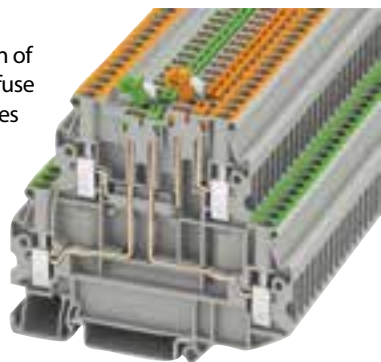
Disconnect terminal blocks with universal screw connection

THE compact UTT 2,5-2MT-P/P double-level knife disconnect terminal blocks from Phoenix Contact are available in various versions with one or two disconnect knives for conductors of up to 4 mm². The space-saving design with a 5.2 mm pitch allows for a high density in the controller wiring.

The offset level between the two levels provides easy access to the lower connection level with full wiring, which is particularly useful for testing purposes. For various switching tasks, particularly in MCR technology, an isolating plug, feed-through metal, component connector

for the solder-free installation of electronic components or a fuse plug for 5 x 20 glass tube fuses can be used individually in the disconnect zone of the disconnect terminal blocks. Measuring instruments can be looped in using the connection screws with integrated test socket, so that voltage and current measurements can be taken at any time without interruption.

The cross-system accessories of the CLIPLINE complete terminal block system can be used for all terminal blocks in the UT screw terminal block series. In addition to using the same



bridge system, the accessories for marking and testing are identical for the push-in, spring-cage, COMBI, and IDE connection technologies.

Enquiries: +27 11 801 8200

Celebrating a century of innovation



IN celebration of its 100 year anniversary, Makita has produced a limited edition Model DHP456ZK Cordless 18 V lithium-ion impact drill/driver in Makita Metallic Blue, which will join the ranks alongside the other white limited edition tools that have been available in the past.

In South Africa, the centenary will be celebrated with a competition in which power tools worth R1-million will be

won. Every month for ten months, ten prizes – a choice of one of three different hampers each valued at R10 000 – will be drawn. The competition, which started in March, will run to 31 December 2015.

Makita was founded by Mr Mosaburo Makita in 1915 as a repairer of electric motors and, in 1958, Makita released its first power tool – a portable electric hand planer.

Soon the company focused entirely on power tools and in 1978 Makita manufactured its

first 7.2V Ni-cd cordless drill. Since then, many new and innovative products have been added to the extensive range of Makita power tools.

Makita is a well-known global brand in over 40 countries providing quality and durable products that are used and trusted by professionals throughout the world.

For information on Makita's full product range and details of the competition, visit www.makita.co.za

Enquiries: +27 11 878 2600

Range of unbalanced motors for harsh operating conditions

VIBRATING equipment supplier, Joest South Africa, has launched an exclusive range of unbalanced motors specifically for Africa's harsh operating conditions. Kim Schoepflin, managing director, says the new IP 66-rated unbalanced motors feature enhanced water ingress protection, a rigid stator housing and an increased mounting area for more secure bolting. This is in addition to increased life and efficiency via the development of a replaceable stator pack, which removes the need for rewinding.

"The overriding benefits are increased uptime, resulting in greater tonnage throughput, while ease of maintenance boosts the reliability," Theresa Walton, general manager: Service at Joest, says.

The unbalanced motors are available in four-, six- and eight-pole configurations,



The unbalanced motor range available from Joest South Africa has been developed in partnership with an established European-based vibrating motor manufacturer.

with torque ranging from 100 to 2 050 kg/cm, up to 690 V. Joest South Africa is a locally owned OEM that designs and fabricates vibrating screens and feeders in-house.

Joest South Africa's custom-designed vibrating equipment is engineered for tonnage, meaning that the equipment is characterised by its robustness and longevity in support of improving the customer's uptime.

The company is committed to providing a fast turnaround time, with 24/7 customer service through its comprehensive network of service centres and branches located in all of the major mining areas in South Africa, in addition to a significant stockholding of OEM parts, which includes Joest South Africa's unbalanced motor and exciter gearbox range.

Enquiries: +27 11 923 9000

How can you tell if a product is SAFE or DANGEROUS?



The circuit-breaker is a vital safety device which has become a commodity. Its commoditization makes it difficult for suppliers to differentiate themselves and many have resorted to price-differentiation – often at the expense of quality and capability to do what it should.

From all accounts there are more than 30 – some say more than 40 – circuit-breaker brands in South Africa. How can you tell from appearance whether a product will stand up to the job it must do? If you rely only on the production of a certificate of one kind or another, you could be making a mistake that will have serious consequences.

For instance, the use of “Golden Samples” to obtain certification, followed by mass-produced products that do not comply is a well-known practice of unscrupulous suppliers. And be conscious of the possibilities of fraud and corruption that allow sub-standard products onto the market.

Counterfeiting and selling non-compliant products and services are criminal acts.

- **Do not be seduced by price**
- **Be suspicious:** Check for the genuine article and for a legitimate Letter of Authority (LOA) issued by the NRCS.
- **Ask questions:** Make contact with the brand-owner to check for authenticity
- **If you're not sure:** Insist on products from Safehouse Association members
- **Contact the Safehouse Association** for assistance.

Be Safe. Always ask for and use SAFEhouse members' products and services:



Become a **SAFEhouse** member today.

The South African Safehouse Association is an independent, registered, non-profit organization established by the electrical industry and committed to communicating with customers.

The South African Safehouse Association has been established to combat this proliferation of dangerous products and services by:

- Making the market aware of the risks in using such products and services
- Exposing sub-standard products and services
- Persuading specifiers, suppliers and distribution channels not to recommend or to offer such products and services for sale

For more information contact: Pierre Nothard
Cell: 083 414 4980 | Tel: 011 396 8140
Email: pierren@safehousesa.co.za

www.safehousesa.co.za



Evaluation of foreign qualifications for registration as an accredited person

I RECEIVE many emails from people who live in African states – and even some from the USA – who write that they intend coming to South Africa and want to know how to register as a Registered Person with the Department of Labour.

The Department of Labour has set out the registration criteria with which a person must comply in order to be registered by the Chief Inspector as an Electrical Tester for Single Phase, Installation Electrician and Master Installation Electrician, as defined in the Electrical Installation Regulations 2009, promulgated by Government Notice R.242 of 6 March 2009.

Section 4: Foreign qualifications

Candidates are required to have all their theoretical foreign qualifications evaluated by the South Africa Qualification Authority (SAQA) and the practical qualifications verified by ESETA accredited providers.

A problem I have encountered is that many applicants get 'stuck' when they get to the section of the document that defines the criteria and they don't get to the final part of the document. Then, when they make their application, they have left out the evaluation and verification requirements.

In this column I will explain the process that all foreign applicants should follow in order to address the criteria in Section 4 of the Department of Labour's document (OHS 3/1/5/7/9 Revised March 2014).

Firstly, foreign candidate should have all their theoretical qualifications evaluated by the South Africa Qualification Authority (SAQA).

This is done by going to the SAQA web page: www.saqa.org.za (<http://41.193.15.87/dfqas/user/home>)

The purpose of the evaluations is to recognise foreign qualifications in terms of the South African National Qualifications Framework (NQF).

SAQA performs this function as an integral part of a national recognition value chain – and the focus of SAQA's role is on finding the foreign qualifications within the NQF.

Evaluation is a two-phased process by SAQA to:

Verify foreign theoretical qualifications by ensuring the following:

- That the issuing bodies are accredited and/or recognised within the national systems in which they operate.
- That the qualifications are legitimately issued by those issuing bodies and are part of that country's national qualifications.
- That the qualifications' documents are in order and that any claims made by individuals are indeed genuine.

Compare the foreign qualifications with South African qualifications and, once the structure and outcomes of the foreign qualifications have been considered, locate them within the South African NQF.

The next process is for foreign candidates to have all their practical qualifications verified by providers that have been accredited by the Energy and Water Sector Education and Training Authority (EWSETA).

This requires that candidates first find out from the EWSETA which providers have been accredited to evaluate foreign qualifications.

The EWSETA-accredited provider will check which South African qualifications SAQA have recorded as being equivalent to the foreign qualifications. Based on this,

the accredited provider will verify whether candidates have the practical abilities that are linked to the awarded NQF qualification.

For example: If SAQA indicates that a foreign qualification is equivalent to NQF 4, then the accredited provider would put the candidate through a practical assessment, which is equivalent to a trade test.

The purpose of evaluating qualifications is to ensure that applicants have the level of knowledge, experience as well as the practical ability,

and they are all in alignment with NQF 4 equivalent qualification.

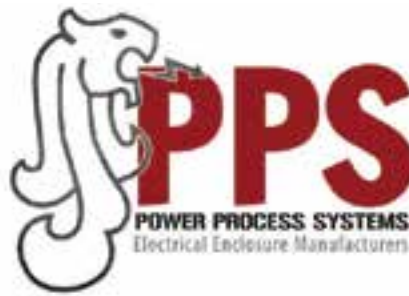
It must be remembered that, in South Africa, we have our own regulations and standards, and the function of the EWSETA-accredited provider is to ensure that foreign candidates conform to these rules and regulations when they apply for registration.

This is why the Department of Labour has incorporated Section 4 into the requirements of the registration process.

The EWSETA-accredited provider has a legal obligation to ensure that South African standards and regulations are known before a foreign candidate applies for registration.

And the EWSETA-accredited provider has to provide a 'statement of results' that is sent to the Department of Labour to verify that the foreign applicant's practical skills have been evaluated.

For additional information on the evaluation process, email Nick du Plessis at nick@pandtechnology.co.za



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Assemblies manufactured to SABS 1765 for the safety of distribution boards



Getting to grips with SANS 10142-1 by Hannes Baard

What standards to apply and how to apply them

MANY times in the past I have mentioned the word, 'regulations'. I've also mentioned what some people like to call the 'regulation book' or 'green book' – actually referring to SANS 10142-1, the 'Code of Practice for the Wiring of Premises'. In this column, I will start looking at the 'regulations' that form part of the Occupational Health and Safety Act (Act 85 of 1993) and how these regulations fit into the greater scheme of things. Although there are many different regulations for the multitude of industries and situations out there, we will concentrate mainly on the regulations that have a direct bearing on our day-to-day lives as electricians.

But, before we dive head-on into these regulations, let's first complete what we started:

Section 42 of the OHS Act

42. Delegation and assignment of functions

(1) The Minister may delegate any power conferred upon him by or under this Act, except the power

contemplated in Section 43, to an officer.

Subsection (1) above allows the Minister of Labour to ask any of his officers in the Department to assist with getting his work done, whatever that might be according to his 'job description, so to speak. The only part of his job that he's not to farm out to anyone and that he actually has to do himself is to "make regulations", as we will see later.

(2) A delegation under subsection (1) shall not prevent the exercise of the relevant power by the Minister himself.

Now, say for instance the Minister did delegate a specific job to one of his officers who kind of stuffs it up ... subsection (2) then allows the Minister to still do the job himself ... possibly thinking he should have done it himself in the first place.

(3) The Minister may authorise any provincial administration or local authority to perform any function referred to in this Act.

The practical application of this subsection can be found at your local Municipality, for instance. It is common knowledge that these 'local authorities' make sure that stipulations in the OHS Act are adhered to by builders and electricians, for example. On a provincial level, the Minister's requirements in terms of the OHS Act are administered at a state hospital, for instance.

(4) An authorisation under subsection (3) shall not prevent the performance of the relevant function by the Minister, the chief inspector or an inspector, as the case may be.

Subsection (4) basically informs us that even though the Minister authorised a local authority or provincial administration to apply the requirements of the OHS Act on his behalf, the local authority and/or the provincial administration can still be called to task if they do not do what is required.

And, now on to the Regulations:

I tend to think of the Regulations as the Occupational Health and Safety Act's 'how to do it manual'. You see, the Act itself is a very high level document as I am sure you have gathered as we've looked at the different sections of the Occupational Health and Safety Act (Act 85 of 1993) over the last few months. On the other hand, the regulations are, in my opinion, the real 'guts' of the Occupational Health and Safety Act. I tend to also put the Regulations on a par with the definitions of any legal or paralegal document. My main 'allies' in any friendly (or not so friendly) debate with regards to what is acceptable or not acceptable are the definitions in SANS 10142-1. So, when something is not completely clear in a Code of Practice such as SANS 10142-1, I first refer to the definitions in the front of SANS 10142-1. If this does not clear up the issue, or if I'm challenged with: "Where did get that from?" Or, "Who told you that?", I turn to the Regulations.

At this point I think it's appropriate to look at the structure of our legislation again ...

Authenticating trained distributors to protect customers

AS an established global supplier of world class products and solutions, CBI-electric: low voltage continues to develop its extensive expertise through the application of the latest technologies and trends, says Charl Osborne, CBI-electric's commercial manager.

He says that, in line with this, CBI-electric's 'channel partnership campaign' aims to empower and develop distributors through training programmes that will ensure that end-users receive world-class value-added service "and are also protected through the correct use of products as required by their respective applications".

He stresses that only distributors who attend CBI training programmes are certified as authenticated distributors. Osborne believes that it is "imperative that distributors of CBI-electric products are properly trained." "This enables them to differentiate between product technologies; identify the dangers associated with incorrect product applications; and ascertain the cost savings that are achievable due to energy efficiency over the lifecycle of a product."

Two levels of training are currently being presented to all CBI partners and, on completion of this training, their employees receive CBI certificates and each organisation receives CBI accreditation to display at their premises.

Level 1 training

The Level 1 training module is presented by CBI to all distributors' sales staff. This training module comprises a number of sections that includes an introduction to the CBI Group and product range offering. It covers basic circuit breaker principles of operation and selection (application and energy efficiency) as well as the correct selection of product accessories (MCBs and



MCCBs). An important aspect of the training is a section that covers the dangers of sub-standard products.

Level 2 training

The Level 2 training module is aimed at distributors' technical staff. This training module is application-based and consists of an introduction to the CBI Group and its product range offering; advanced principles of circuit breaker operation; selection (application and energy efficiency); and the correct selection of product accessories (MCB and MCCB).

The module covers cascading/discrimination and curve selection as well as the dangers of sub-standard products. This module is presented at CBI's factory in Elandsfontein.

A full list of authenticated distributors is available on the CBI-electric: low voltage website: www.cbi-lowvoltage.co.za

Enquiries: +27 11 928 2000



Figure 1 – the OHS Act hierarchy.

From this illustration, it is clear that the OHS Act is the legislation that paints our industry in broad strokes. The Regulations are the legislative 'how to do it manual', in a manner of speaking. Inter alia, this 'manual' tells us what standards we have to apply and the 'Codes of Practice', in turn, give us insight into how to apply the standards.

And, when we get to our daily grind, there are a lot of people advising us how to do our job in a non-legislative way.

For starters, let's look at the layout of the regulations (and there are enough of them, believe me.)

I have roughly categorised them as follows:

General regulations

- General Administrative Regulations.
- General Safety Regulations.
- Major Hazard Installation Regulations.
- Regulations for Hazardous Biological Agents.
- Explosive Regulations.
- Construction Regulations.

Health regulations

- Asbestos Regulations.
- Diving Regulations.
- Environmental Regulations for the Workplace.
- Facilities Regulations.
- Hazardous Chemical Substances Regulations.
- Lead Regulations.
- Noise Induced Hearing Loss Regulations.

Mechanical regulations

- Driven Machinery Regulations.
- General Machinery Regulations.
- Lift, Escalator and Passenger Regulations.
- Regulations concerning the Government Certificate of Competency.
- Vessels Under Pressure Regulations.

Electrical regulations

- Electrical Installation Regulations.
- Electrical Machinery Regulations

And then there are, of course, the **Construction** and **Driven Machinery Regulations**, too.

But first onto what the Act itself has to say about this subject:

43. Regulations.

(1) The Minister may make regulations –

(a) As to any matter, which in terms of this Act, shall or may be prescribed;

(b) Which, in the opinion of the Minister, are necessary or expedient in the interests of the health and safety of persons at work or the health and safety of persons in connection with the use of plant or machinery, or the protection of persons other than persons at work against risks to health and safety arising from or connected with the activities of persons at work, including regulations as to ...

And here is where we will call it a day for now. So, until our next regular appointment ...



Rakesh Heeralal from Voltex assists a visitor to the stand with product information.



Ben Deysel (far left) from Voltex Smart Solutions and Fred Wilson from Bellco Electrical (second from right) discuss products with visitors to the Voltex stand at Africa Utility Week.

Reliable standby power solutions get attention at AUW

VOLTEX received a record number of visitors to its stand at African Utility Week (AUW) held at the Cape Town International Conference Centre from 12 to 14 May 2015. Positioned as a 'global meeting place', conference and trade exhibition for African power and utilities, this year's event attracted over 6 000 attendees made up of utility heads, the continent's leading renewable energy project managers, investors, technology providers and international professionals. More than 80% of the attendees were from Africa with the balance coming from Europe, Asia and the USA.

The Voltex exhibit offered visitors interactive product displays of Voltex MV/LV Solutions' distribution boards, Weidmuller enclosures, LSIs circuit breakers, the Elspec Activar and a 25 kVA generator as well as energy efficient solar lighting products.

Not surprisingly, the 25kVA generator and Activar were the talking points on the stand. Shawn Roets, Western Cape regional manager, says, "With the current instability in

power, businesses have no choice but to look for reliable standby power solutions in order to keep their operations going. The 25kVA generator, therefore, attracted keen interest from prospective buyers, particularly from the agricultural and commercial sectors."

Another trend that was evident at this year's exhibition was the increased interest in alternative energy such as solar and wind-generated power solutions and power metering. "This highlights that, aside from the immediate demand for reliable energy in South Africa, there is considerable concern about the ever-increasing cost of energy and the long-term sustainability thereof," adds Roets.

"As a market leader, Voltex is well-positioned to drive the development of technologies that achieve energy-efficiency and sustainable energy solutions. With a footprint in Africa, Voltex can contribute positively to the adoption of sustainable and environmentally-friendly energy-solutions and technologies."

Enquiries: +27 11 879 2000

Mark Palmer, Western Cape Electrical Inspection Authority (WCAEIA)

'Reasonably safe' – an oxymoron?

IN last month's column, I touched on the concept of 'reasonably safe'. This terminology is currently used within the scope of the Electrical Installation Regulations (EIR) and is, therefore, also found in declarations when Registered Persons are required to sign Certificates of Compliance.

It has become increasingly apparent over the years that this concept is clearly misunderstood by the electrical industry as a whole, and registered persons in particular. The greatest concern when dealing with any legislation, is understanding the methodology behind such legislation and the structure

in which electrical installation work is performed.

To clarify the aspects of electrical installation work, it becomes essential that Registered Persons understand the ramifications of terminology used within the legislation. In this regard, I would like to start with the declaration as prescribed by EIR 9 (2) i.e. "An electrical installation which existed prior to the publication of the current edition of the health and safety standard incorporated into these Regulations in terms of Regulation 5(1), complies with the general safety principles of such standard". This Regulation also references the concept

of 'reasonably safe'.

The standard being referred to is the SANS 10142-1 – Wiring of Premises which is an incorporated standard in the EIR and, therefore, also ensures the force of law. In referencing the provisions of SANS 10142-1 therefore, in particular Section 8 (Verification and Certification), reference to the concept of 'reasonably safe' is again found in the inspection declaration 13(b) i.e. "In the case of installations that existed before the publication of this edition of this part of SANS 10142, the installation complies with the general safety principles of this edition of this part of SANS 10142 and is

reasonably safe".

When dealing with this concept, however, it must be remembered that the Electrical Installation Regulations are regulations incorporated into the Occupational Health and Safety Act 85 of 1993 (OHSA), and Regulations are always superseded by an Act.

In referencing the Act, it becomes clear that the words 'reasonably safe' are not used and this context reference must be made to the definitions of 'safe' and 'reasonably practicable'.

- 'Safe' means free from any hazard;
- 'Hazard' means a source of or exposure to danger;
- 'Reasonably practicable' means practicable having regard to:
 - a) The severity and scope of the hazard or risk concerned;
 - b) The state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
 - c) The availability and suitability of means to remove or mitigate that hazard or risk; and
 - d) The cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from.

In determining by means of inspection and testing whether any part of an electrical installation can be regarded as being 'reasonably safe', it must firstly be placed into the scope of the methodology behind the Act and the above definitions.

Therefore, the Registered Person must determine whether the aspect of the electrical installation being inspected and tested is 'safe' (that is, being free from any hazard); that the 'hazard' applicable to this aspect has been identified (that is, the source of exposure to danger); and that the 'danger' is understood (that is to mean 'anything which may cause injury or damage to persons or property').

And, once all of the above is placed

into perspective, relative to the aspect of the electrical installation under review, the actions to be taken in order to eliminate or mitigate the hazard fall within the boundaries of what is 'reasonably practicable'.

The concept of 'reasonably practicable', as defined, is essential in the court's application of the 'reasonable man's test' when things go wrong!

The 'reasonable man's test' is in itself not very often understood and is generally broadly defined as 'what would a reasonable person have done in my position?' The issue behind this concept, however, is much wider than this in that the 'position' as detailed in the broader definitions is clearly defined. The 'reasonable man's test' has precedent in Holmes JA in Kruger v Coetzee 1966 (2) SA 428 (A) at 430F which reads ...

"For the purposes of liability culpa (negligence), it arises if –

... a diligens paterfamilias in the position of any defendant – would foresee the reasonable possibility of his conduct injuring another in his person or property and causing him patrimonial loss; and ... would take reasonable steps to guard against such occurrence.

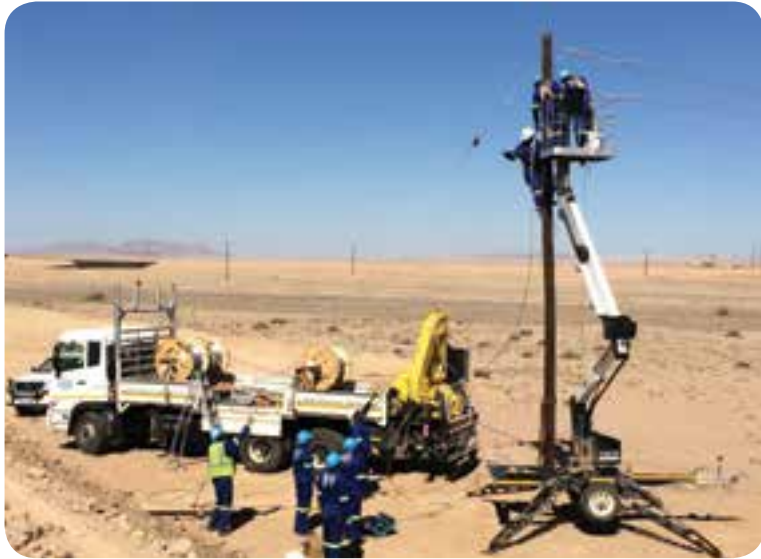
The 'position' of a person as described in the general aspects as earlier discussed, is much more specific in the legal application, however, where the position of any defendant (*diligens paterfamilias*) is defined as being as a 'diligent father'.

Decisions therefore based on what is reasonably safe must be made by putting oneself in the position of a 'diligent father'.

This aspect changes the entire perspective of what is required by Registered Persons when attesting to the safety of electrical installations.

I will conclude this series of columns next month by taking a closer look at the concept of 'reasonably practicable', a key element in the reasonable man's test.

Major contract at platinum mine a 'coup'



Stringing a 33 kV OHL (overhead line) at Enl Electrical's contract at Husab in Namibia.



Trevor Naudé, managing director of Enl Electrical.



Terminating a distribution board at Enl Electrical's contract at Husab in Namibia.

THE Zest WEG Group's Enl Electrical, one of Africa's largest electrical construction companies, has secured a major contract at the WBJV Project 1 (Maseve) mine for client DRA, the main EPCM contractor on the project. This follows Enl Electrical successfully opening its Rustenburg branch in 2014 to service the platinum mining sector in the region.

Trevor Naudé, managing director of Enl Electrical, says the contract represents a major coup for the Zest WEG Group as Maseve is South Africa's first Greenfield platinum mine in over a

decade. "We secured the Maseve contract towards the end of 2014, in the wake of numerous small Brownfield projects whereby we established our base in the region."

Naudé adds that the greater Zest WEG Group will be involved in this flagship project, from supplying the mill motors to the electrical and instrumentation infrastructure and the associated electrical panels. "We will be carrying out all the associated electrical cabling and racking, in addition to installation of all the instrumentation." Enl Electrical mobilised on-site in March this year,

with contract completion anticipated by July. "This is a significant contract, and it is also fast-track."

In addition, Naudé reveals that Enl Electrical has clinched a major contract from Anglo Platinum for the electrical and instrumentation infrastructure for a new pump station. "We secured the Maseve contract in December 2014 and the Anglo Platinum contract in January 2015, both of which bode well for the year ahead. "Not only is Enl Electrical optimistic at the overall outlook for 2015, but we are optimistic about the continued activity in the South African mining industry as a whole. The Zest WEG Group will be targeting the mining industry aggressively, as we have the level of excellence necessary to sustain new business and to successfully deliver such turnkey projects," Naudé says.

Enl Electrical is also progressing with its contract at Swakop Uranium's Husab mine in Namibia, where its scope of work is the construction of 33 kV overhead power lines, as well as the installation and commissioning of all medium voltage and high voltage switchgear. The project is scheduled for completion in August this year.

Enquiries: +27 11 723 6000

Locally designed cable cutter head for harsh African conditions

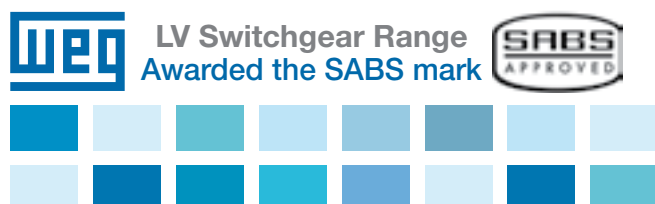
STONE Stamcor's answer to reliable cable cutting is the R100H hydraulic cutter head – which is designed and manufactured by South Africans especially for South Africa's harsh conditions. Mark Talbot, sales manager at Stone Stamcor says, "The R-100 is unique with its robust design and unsurpassed reliability and, most importantly, it's 100% proudly South African." Designed to cut copper and aluminium armoured cables, the R100 is a hydraulic cutter head that is powered by an electric hydraulic pump or hydraulic foot pump, which are also available from Stone Stamcor. Talbot says the R100H cuts up to:

- Bare copper strand: 42 mm diameter.
 - Bare aluminium strand: 46 mm diameter.
 - Telephone cable CCP: 100 mm diameter.
 - Lead sheathed cable: 100 mm diameter.
 - Underground reinforced cable: 75 mm diameter.
- "With its refined hydraulic system for ultra-performance, speed and reliability the R100H is field proven for ultimate reliability in the harshest environments," says Talbot.

Enquiries: +27 11 452 1415



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WEG Group

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Eurolux
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HellermannTyton
Lapp Group SA
Legrand
O-line
Schneider Electric
Stone Stamcor
Three-D Agencies
Versalec Cables

Distributors

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Allbro Industries
Alvern Cables
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Cabstrut
Crabtree Electrical Accessories
Eaton Electric
Elen Electrical Enclosures
HellermannTyton
Magnet Electrical Supplies
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MCE Global Suppliers
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Shorrock Automation
Stone Stamcor
Three-D Agencies
Versalec Cables
Voltex
Waco

Busbar trunking systems

Bellco
 Full range of busbar trunking systems
Voltex
 Full range of busbar trunking systems
Voltex LSis
 Full range of busbar trunking systems
Voltex MVLV
 Full range of busbar trunking systems

Cable marking

Aberdare Cables
 Unique conductor marking; sheath embossing
ACDC Dynamics
 Full range of cable marking systems
ACTOM Electrical Products
 Full range of marking systems
ARB Electrical Wholesalers
 Full range of cable marking systems
Alstom Electrical Products
 Full range of cable marking systems
Atlas Group
 Full range of cable marking systems
Bellco
 Full range of cable marking systems
Brady Corporation
 Complete range of durable identification labels including self-lams, flag labels and sleeves, cable and wire identification, panel board identification and telecom/data identification
Eaton Electric
 Full range of cable marking systems
HellermannTyton
 Full range of cable marking systems
Lapp Group SA
 Full range of cable marking systems
Legrand
 CAB 3, Logicab 2 and Duplix identification and marking systems for easy identification of circuits
Magnet Electrical Supplies
 Full range of cable marking systems
Phambili Interface
 Full range of cable marking systems
Stone Stamcor
 Range of cable identification systems
Three-D Agencies
 Fleximark; wire markers; cable markers; high temperature cable markers; stainless steel cable markers
Voltex
 Full range of cable marking systems

Disclaimer: Information will be published as supplied. Only manufacturers who meet the deadline are included in the guide. The onus is on manufacturers to ensure that the editor is notified of any changes to existing listings.

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Major Tech
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Versalec Cables
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Voltex
 Hugh Ward
Voltex LSis
 Gary Paterson
Waco
 Jaco Coetzee

Cable fault location test equipment

ACDC Dynamics
 Full range of cable fault location test equipment
ARB Electrical Wholesalers
 Full range of cable fault location test equipment
Atlas Group
 Full range of cable fault location test equipment
Bellco
 Full range of cable fault location test equipment
Magnet Electrical Supplies
 Full range of cable fault location test equipment
Major Tech
 MT195 – cable meter; MT196T – cable identifier; MT1915 – two-in-one cable finder and digital multimeter
Voltex
 Cable fault location test equipment

MV cables

Aberdare Cables
 Full range of MV cables
ACTOM Electrical Products
 Distributors of full drums and lengths cut to size: paper insulated lead cables (PILC); cross-linked polyethylene (XLPE); MV aerial bundled conductors (ABC)
ARB Electrical Wholesalers
 Full range of MV cables
Atlas Group
 Full range of MV cables
Bellco
 Full range of MV cables
Eaton Electric
 Full range of MV cables
Magnet Electrical Supplies
 Full range of MV cables
Versalec Cables
 Full range of MV cables
Voltex
 Full range of MV cables

Trailing cables

Aberdare Cables
 Elastomeric insulated cables: flexible cable (types H05 RN-F, H07 RN-F); welding cable, mining trailing cable (up to 33kV)
ACDC Dynamics
 Full range of trailing cables
ACTOM Electrical Products
 Rubber and PVC trailing cables
Alvern Cables
 Permotrail
ARB Electrical Wholesalers
 Full range of trailing cables
Atlas Group
 Full range of trailing cables
Bellco
 Full range of trailing cables
Lapp Group SA
 Full range of trailing cables
Magnet Electrical Supplies
 Full range of trailing cables
Voltex
 Full range of trailing cables

Crimp tools and cutters

ACDC Dynamics
 Full range of crimp tools and cutters
ACTOM Electrical Products
 Full range of tools and equipment for cables
ARB Electrical Wholesalers
 Full range of crimp tools and cutters
Atlas Group
 Full range of crimp tools and cutters
Bellco
 Full range of crimp tools and cutters
HellermannTyton
 Full range of crimp tools and cutters
Lapp Group SA
 Full range of tools and equipment cutters
Legrand
 Starfix
Magnet Electrical Supplies
 Full range of crimp tools and cutters
Major Tech
 Full range of high quality drop forged crimpers featuring integral ratchets with release mechanism for guaranteed optimum crimping with controlled calibrator assembly to comply with ISO 9000 standard requirements
MCE Global Suppliers
 MCE hand held cable cutters, wire strippers, crimping pliers, mechanical crimping pliers, hydraulic crimping pliers, hydraulic punch and die set
Phambili Interface
 Full range of crimp tools and cutters
Stone Stamcor
 Distributor of Burndy hydraulic compression equipment; Klauke crimping tools and cable cutters
Three-D Agencies
 Crimping tools, cable cutters, wire strippers
Voltex
 Full range of crimp tools and cutters

Lugs, ferrules, connectors, pre-insulated terminals

ACDC Dynamics
 Full range of lugs, ferrules, connectors, pre-insulated terminals
ACTOM Electrical Products
 Full range of lugs, ferrules
ARB Electrical Wholesalers
 Full range of lugs and ferrules
Atlas Group
 Full range of lugs, ferrules, connectors and pre-insulated terminals
Bellco
 Full range of lugs, ferrules, connectors and pre-insulated terminals
Brady Africa
 Full range of non-conductive electrical lock-out/tagout products to isolate energy sources during maintenance
Eurolux
 Full range of SABS-approved lugs, ferrules, connectors, pre-insulated terminals
HellermannTyton
 Full range of lugs, ferrules, connectors, pre-insulated terminals
Legrand
 Starfix ferrules
Magnet Electrical Supplies
 Full range of lugs, ferrules, connectors, pre-insulated terminals
MCE Global Suppliers
 Morsetitalia DIN terminals and accessories
O-line
 Full range of lugs, ferrules, connectors, pre-insulated terminals
Stone Stamcor
 Copper/aluminium compression lugs and ferrules; supply of specialised connectors to customers' requirements; supply of KS pre-insulated terminals
Three-D Agencies
 Copper lugs and ferrules, pre-insulated and un-insulated terminals; brass terminals; automotive terminals and connectors
Voltex
 Full range of lugs, ferrules, connectors, pre-insulated terminals

Ducting

ACDC Dynamics
 Full range of ducting
ARB Electrical Wholesalers
 Full range of ducting
Atlas Group
 Full range of ducting
Bellco
 Full range of ducting
Crabtree Electrical Accessories
 Complete range of ducting and fittings
Elen Electrical Enclosures
 Grey slotted trunking
Legrand
 Full range of DLP perimeter trunking
O-line
 Full range of ducting
Phambili Interface
 Full range of ducting
Three-D Agencies
 PVC slotted trunking, standard and narrow slots
Voltex
 Full range of ducting
Waco
 Full range of ducting

Specialised cables

Aberdare Cables
 Fyrsure; Waterblocked XLPE
ACTOM Electrical Products
 Full range of specialised cables on request
Alvern Cable
 Railway specification
ARB Electrical Wholesalers
 Full range of specialised cables
Atlas Group
 Full range of specialised cables
Bellco
 Full range of specialised cables
Lapp Group SA
 Full range of specialised cables
Legrand
 Legrand cabling system 2 (LCS²) includes copper (cat 6A, cat 6 and cat 5e, fibre optic and wi-fi solutions as well as enclosures
Versalec Cables
 Full range of specialised cables
Voltex
 Full range of specialised cables

Cables for harsh environments

Aberdare Cables
 Fyrgard; Lohal; Lotox; Fysure
ACTOM Electrical Products
 Suppliers of anti-termite cables; silicone single wires and cabytres; H07RN-F rubber cables
Alvern Cables
 Polyolifin and XLPE
ARB Electrical Wholesalers
 Full range of cables for harsh environments
Atlas Group
 Full range of cables for harsh environments
Bellco
 Full range of cables for harsh environments
Eaton Electric
 Full range of cables for harsh environments
Eurolux
 Hazardous area lighting
Lapp Group SA
 Full range of cables for harsh environments
O-line
 Full range of cables for harsh environments
Versalec Cables
 Full range of cables for harsh environments
Voltex
 Full range of cables for harsh environments

Cable joints

ACDC Dynamics
 Full range of cable joints
ACTOM Electrical Products
 RELCO MV paper cable joint boxes; cast iron joint boxes; heatshrink jointing and termination range; cold shrink jointing and termination range; LV resin joints; MV jointing compounds; jointing tapes
ARB Electrical Wholesalers
 Full range of cable joints
Atlas Group
 Full range of cable joints
Bellco
 Full range of cable joints
Eaton Electric
 Full range of cable joints
Eurolux
 Size 1 to 50 joining kits
HellermannTyton
 Full range of cable jointing products
Magnet Electrical Supplies
 Full range of cable joints
O-line
 Full range of cable joints
Three-D Agencies
 LV and MV heatshrink kits
Voltex
 Full range of cable joints
Waco
 Full range of cable joints

Cable securing products

Aberdare Cables
CableGuard; Unique conductor marking

ACDC Dynamics
Full range of cable securing products

ACTOM Electrical Products
BBS cable clamps and wedges for mine shafts

ARB Electrical Wholesalers
Full range of cable securing products

Atlas Group
Full range of cable securing products

Bellco
Full range of cable securing products

Brady Africa
Full range of cable securing products

Cable Croc
Anti-theft cable securing products

Cabstrut
Full range of cable securing products

HellermannTyton
Full range of cable securing products

Lapp Group SA
Cable securing products

Legrand
Colson cable ties

Magnet Electrical Supplies
Full range of cable securing products

Major Tech
Plasti-Loc cable ties from miniature to extra heavy duty – available in nylon 6/6 in black and natural

O-line
Full range of cable securing products

Phambili Interface
Full range of cable securing products

Three-D Agencies
Nylon6.6 cable ties; nylon 12 cable ties; stainless steel cable ties; P-clips; flexible woven sleeving

Voltex
Full range of cable securing products

Earth bars

ACDC Dynamics
Full range of earth bars

Allbro Industries
Full range of earth bars

ARB Electrical Wholesalers
Full range of earth bars

Atlas Group
Full range of earth bars

Bellco
Full range of earth bars

Eaton Electric
Full range of earth bars

Legrand
Distribution blocks

Major Tech
Full range of Econo board earth bars: 4-, 6-, 8-, 10-, 12-, 15-, and 18-modules

MCE Global Suppliers
MCE earth bars, Onesto earth bars

Voltex
Full range of earth bars

Waco
Full range of earth bars

Cable ladders, cable trays

ACDC Dynamics
Full range of cable ladders, cable trays

ACTOM Electrical Products
All cable ducting and trays

ARB Electrical Wholesalers
Full range of cable ladders and cable trays

Bellco
Full range of cable ladders, cable trays

Brady Africa
Full range of cable ladders and cable trays

Cabstrut
Powerack weld-free cable ladder; return flange cable tray; welded wire mesh tray

Eaton Electric
Full range of cable ladders and cable trays

Elen Electrical Enclosures
EBO cable ladder and cable tray in GRP (glass fibre reinforced polyester)

Grafoplast
Interflex cable trays and cable baskets

Legrand
Cablofil cable trays

O-line
Full range of cable ladders, cable trays

Stone Stamcor
Brady cable identification systems

Voltex
Full range of cable ladders, cable trays

Cable trench covers

ARB Electrical Wholesalers
Full range of cable trench covers

Atlas Group
Full range of cable trench covers

Bellco
Full range of cable trench covers

Voltex
Full range of trench covers

Panel wiring, terminals and terminal blocks

ABB South Africa
SNK and SNA ranges: screw; PI-spring (push-in); ADO systems (IDC); pluggable, etc

Aberdare Cables
Slipdac; panel flex; Nitrile panel flex

ACDC Dynamics
Full range of panel wiring, terminals and terminal blocks

ACTOM Electrical Products
Full range of single and multi-core panel wires

Alvern Cables
Single flex and Panel flex cables

ARB Electrical Wholesalers
Full range of panel wiring, terminals and terminal blocks

Atlas Group
Full range of panel wiring, terminals and terminal blocks

Bellco
Full range of panel wiring, terminals and terminal blocks

Brady Africa
Full range of panel wiring, terminals and terminal blocks

Eaton Electric
Full range of panel wiring, terminals and terminal blocks

HellermannTyton
Full range of panel wiring, terminals and terminal blocks

Legrand
Viking 3 junction blocks

Magnet Electrical Supplies
Full range of panel wiring, terminals and terminal blocks

MCE Global Suppliers
Morsettitalia terminal blocks, MCE DIN multi-pole distribution blocks

O-line
Full range of panel wiring, terminals and terminal blocks

Phambili Interface
Full range of panel wiring, terminals and terminal blocks

Three-D Agencies
Strip connectors

Voltex
Full range of panel wiring/terminals and terminal blocks

Conduit

ACDC Dynamics
Full range of conduit

ACTOM Electrical Products
All PVC and steel conduit and fittings

ARB Electrical Wholesalers
Full range of conduit

Atlas Group
Full range of conduit

Bellco
Full range of conduit

Brady Africa
Full range of conduit

Crabtree Electrical Accessories
Conduit; compact mini trunking; cable line trunking; accessories for trunking; PVC conduit accessories; flexible conduit

Eaton Electric
Full range of conduit

Eurolux
20 mm and 25 mm conduit

HellermannTyton
Full range of flexible conduit

Lapp Group SA
Full range of conduit

Magnet Electrical Supplies
Full range of conduit

O-line
Full range of conduit

Schneider Electric
Flexible corrugated conduit

Three-D Agencies
Flexible conduit

Voltex
Full range of conduit

Flexible cables

Aberdare Cables
Power flex single core cable

ACDC Dynamics
Full range of flexible cables

ACTOM Electrical Products
Welding cables, cabtyres, trailing cables, panel wires, submersible cables

ARB Electrical Wholesalers
Full range of flexible cables

Alvern Cables
Cabtyre, Permo power, Ripcord

Atlas Group
Full range of flexible cables

Bellco
Full range of flexible cables

Lapp Group SA
Full range of flexible cable

Magnet Electrical Supplies
Full range of flexible cables

Voltex
Full range of flexible cables

LV cables

Aberdare Cables
Full range of LV cables

ACDC Dynamics
Full range of LV cables

ACTOM Electrical Products
Armoured LV 1.5 – 16mm² Bells cables (SWA and ECC); armoured LV 25 – 300mm² mains cables (SWA and ECC); aerial bundled conductors (ABC) and Airdac; Interdac 1.9/3.3 kV cables; GP housewire, Surfux and flat twin; bare copper earth wires; aluminium conductors steel reinforced (ACSR); low and halogen-free cables for mining

Alvern Cables
Stranded and flexible, SWA, housewire, Alfix, Alvex

ARB Electrical Wholesalers
Full range of LV cables

Atlas Group
Full range of LV cables

Bellco
Full range of LV cables

Eaton Electric
Full range of LV cables

Versalec Cables
Full range of LV cables

Voltex
Full range of LV cables

Cable glands

ACDC Dynamics
Full range of cable glands

ACTOM Electrical Products
CCG and Pratley glands and shrouds

ARB Electrical Wholesalers
Full range of cable glands

Atlas Group
Full range of cable glands

Bellco
Full range of cable glands

Eaton Electric
Full range of cable glands

Elen Electrical Enclosures
AGRO cable glands: polyamide, nickel-plated brass, stainless steel, reducers, blanking plugs

HellermannTyton
Full range of SABS approved cable glands

Lapp Group SA
Full range of cable glands

Legrand
ISO glands and PG glands

Magnet Electrical Supplies
Full range of cable glands

O-line
Full range of cable glands

Voltex
Full range of cable glands

Waco Industries
Full range of cable glands

Neutral bars

ACDC Dynamics
Full range of neutral bars

Allbro Industries
Full range of neutral bars

ARB Electrical Wholesalers
Full range of neutral bars

Atlas Group
Full range of neutral bars

Bellco
Full range of neutral bars

Eaton Electric
Full range of neutral bars

Legrand
Distribution blocks

Major Tech
Neutral bars: 4-, 6-, 8-, 10-, 12-, 15-, and 18-modules

MCE Global Suppliers
MCE neutral bars, Onesto neutral bars

Voltex
Full range of neutral bars

Voltex LSIs
Full range of neutral bars

Telecom, instrumentation and control cables

Aberdare Cables
Multicore cable

ACTOM Electrical Products
Full range of telecom, instrumentation, and control cables

ARB Electrical Wholesalers
Full range of telecom, instrumentation and control cables

Atlas Group
Full range of telecom, instrumentation and control cables

Bellco
Full range of telecom, instrumentation and control cables

Lapp Group SA
Full range of telecom, instrumentation and control cables

Major Tech
Cable and Lan testers for the telecommunications industry

Voltex
Full range of telecom, instrumentation and control cables

HellermannTyton
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ABB
+27 10 202 5000

MCE ELECTRIC
+27 11 683 0641

ACDC DYNAMICS
+27 10 202 3300

BRADY 100
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A SMARTER, SAFER WORLD
+27 11 704 3295

MAJOR TECH
08 61 62 5678

legrand
+27 11 444 7971

Schneider Electric
+27 11 254 6400

voltex
your electrical connection
+27 11 879 2000

ABERDARE CABLES
Driven by Powertech
+27 11 396 8000

Stone-Stamcor
Bringing Power to your Product
+27 11 452 1415

cablecroc
PTY LTD
+27 13 712 3900

The importance of periodic inspection of portable earthing and short-circuiting devices



AN important measure when working on electrical installations, according to the five safety rules of DIN VDE 0105 - 100, is the fourth rule: "Carry out earthing and short-circuiting". This ensures that the installation is dead while work is carried out. However, every protection measure is only as safe as the tools used.

Reduced cable cross-sections of portable earthing and short-circuiting devices (EaS devices) resulting from copper corrosion and breakage of conductor strands, or increased resistances in the connections, may have fatal consequences when earthing and short-circuiting devices are

subjected to short-circuit currents.

Therefore, portable EaS devices must be tested prior to each use and at regular intervals. So far, only a visual inspection made economic sense. A new procedure is now available which provides reliable information on the condition of the portable EaS device based on static and dynamic measurements of the ohmic resistance.

DEHN Africa offers this improved test for portable EaS devices on the customers' premises.

An earthing and short-circuiting device is tested in three steps and the resistance values are compared with theoretically and experimentally

determined limit values. The first step is the visual inspection for visible signs of damage. A static test is performed in the second step, in which the absolute resistance value is measured at the stationary earthing and short-circuiting device. Step three includes the dynamic test, which notes the measurement of the relative change in resistance at the moving earthing and short-circuiting device. The measurement of the resistance change value ΔR between the non-moving and the moving EaS device is a new approach which allows for the detection of local damage, such as breakage of conductor strands in the conductor cable. The new test setup consists of a special micro-ohmmeter, a rail structure and the relevant software. Practical testing has shown that numerous earthing and short-circuiting devices tested are invisibly damaged. This damage could not be found by means of visual inspection alone, thus illustrating the importance of using the new procedures to test used EaS devices at regular intervals.

Safety devices and equipment from DEHN are manufactured and tested in line with the requirements of applicable standards. In addition to maintenance tests on earthing and short-circuiting devices, DEHN is also a reliable partner for maintenance tests on voltage detectors, switching sticks, fuse tongs, insulating sticks and earthing sticks.

Enquiries: +27 11 704 1487

Professional laminated labels for electricians and cable installers

- Backlit easy-to-read LCD display
- Uses 6,9,12,18 & 24mm TZe laminated tapes
- Rugged and durable protective hand grip
- Easy label creation for electrical symbols
- Create DB board label templates
- Cable wrapping capability
- PC connectivity via USB cable



Visit www.brother.co.za to view our full product range.
print • copy • scan • fax • label...and sew much more



Versatile ac/dc digital clamp meter with one year warranty

MEGGER's DCM340 is a highly versatile instrument and is ideal for use in the installation, maintenance, monitoring or checking of ac or dc electrical systems and equipment. The DCM340 is capable of measuring ac and dc currents up to 600 A; ac and dc voltage up to 600 V; resistance up to 400 Ω and frequency up to 400 Hz.

Current measurement combined with the comprehensive and accurate multimeter functions of the DCM340 eliminate the need to carry around both a clamp meter and multimeter as this instrument does it all.

The large clear digits of the numeric display are complemented by the high-resolution digital bar graph, useful for indicating trending and fluctuation of measurement. The backlight assists use in poorly lit areas such as distribution cupboards and corners of switchrooms; and the data-hold feature enables use on difficult access cables where otherwise the display may be impossible to see.

Min/Max hold provides the ability to store the maximum and minimum dc or rms values over a period of time. While storage is taking place, either the present, maximum or minimum value can be displayed. Peak hold stores the maximum and minimum peak value of an ac signal at a 10 ms sample rate. The auto-off feature automatically places the meter in power-save mode after 30 minutes from power-on, but this can be disabled if required for min/max measurements.

The DCM340 is safety rated to IEC 61010-1 Cat III 600 V and is drop-tested to 1.2 m onto a hard floor. It is supplied with test leads and a carry case, and a full one-year manufacturer's warranty.

Megger is represented locally by Surgetek.
All content courtesy of Megger.



Enquiries: +27 11 792-1303



Medium Voltage Power **cables** you can trust

Aberdare Cables, a leading cable manufacturer since 1946, brings you medium voltage electric cable of the highest standard in quality, safety and reliability.

Paper insulated lead covered (PILC) cables and cross-linked polyethylene (XLPE) cables are used in many electrical distribution and reticulation applications including: • Municipal distribution • Mining (special construction with water blocking as well as flame retardency for shaft installations available) • Petrochemical industry • Wind farms

181A Barbara Road, Elandsfontein, Gauteng P.O. Box 1679, Edenvale, Gauteng 1610, South Africa
Tel +27 (0)11 396 8000 Fax +27 (0)11 396 8010 www.aberdare.co.za



ABERDARE
CABLES

Driven by Powertech 

Flexible cable solution with range of supporting products

THE Soluflex cable floor system from Legrand has been designed for flexibility in the work environment and has new features for efficient power, data and telecommunications connections.

"The Soluflex system consists of metal tiles mounted on polypropylene supports to provide sufficient space beneath the floor for cabling. This design eliminates the need for exposed cables and extensions, resulting in a flexible, practical and attractive floor system," states Johan Bosch, sales manager, Legrand SA. "Soluflex is designed for low voltage equipment and data network installations in modern buildings and is also perfect for renovations in existing premises that require additional electrical infrastructure.

"Advantages of this 'green build-

ing design' system over conventional raised access floors include easy cable laying and accessibility to cables, use of the whole floor surface – each Soluflex pathway is a containment system – and there is no need for trunking, which means substantial cost savings. Office configurations are also quick to plan, install and re-arrange.

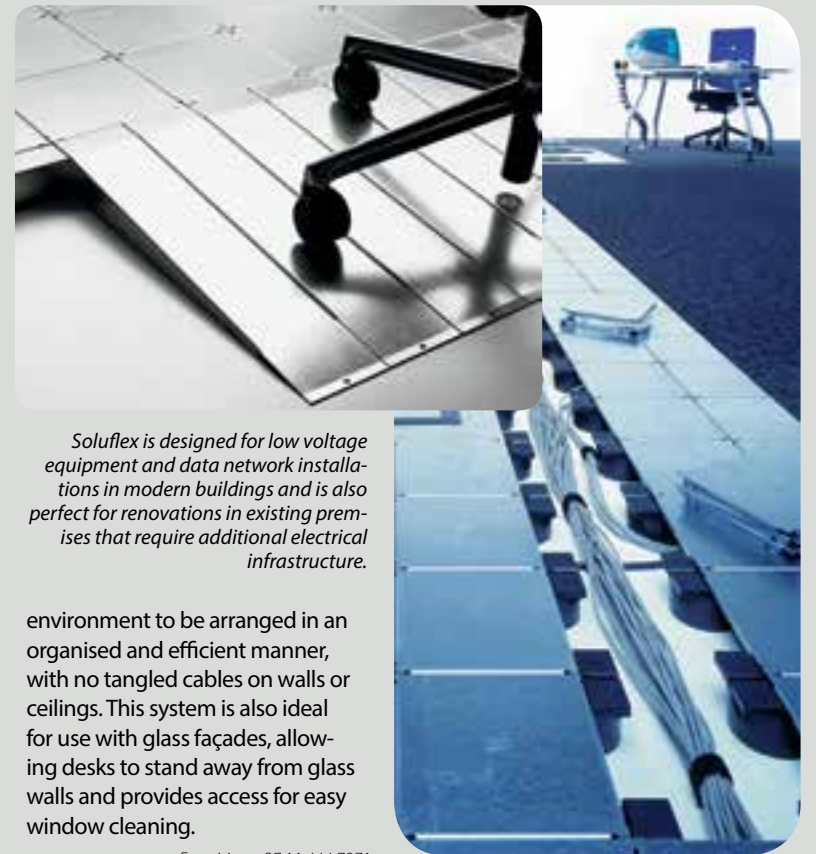
"Planning during the design phase of the installation can be done with no limitations of work places, partition walls and office layouts. The flexibility of this recyclable system means that changes and adjustments can be made at a late stage of the installation and modifications can be done at any time afterwards, with no impact on the building structure.

"This durable system offers up to six times more distributed load capacity than conventional raised floor systems. What's important is the electrical components under the floor can be easily adapted with the installation of new cables during office hours, while normal work continues. There is no need for the disruption of power cuts or data network disconnections."

Soluflex is made up of 225 x 225 mm pre-galvanised steel tiles, with a wider choice of heights: 37, 50, 60, 70, 80, 90, 120 and 150 mm. Enhancements of this system also include improved acoustics and sound insulation. The diagonal structure of this systems means that cables are perfectly parallel so data cables can be crossed at the required angle of 90°. Round supports prevent cable damage.

A range of supporting products and accessories has been specially designed to provide a neat and safe finish of every Soluflex installation. These components include cable spines, fully recessed floor boxes and pop-up units for desktops and floors.

The large space for cabling offered by Soluflex enables the office



Soluflex is designed for low voltage equipment and data network installations in modern buildings and is also perfect for renovations in existing premises that require additional electrical infrastructure.

environment to be arranged in an organised and efficient manner, with no tangled cables on walls or ceilings. This system is also ideal for use with glass façades, allowing desks to stand away from glass walls and provides access for easy window cleaning.

Enquiries: +27 11 444 7971

cablecroc (PTY) LTD
THE ULTIMATE IN PREVENTING CABLE THEFT

Heavy Duty Ground Anchor
Cable croc is a system designed to combat and deter underground cable theft as well as exposed cables above ground level.

It is cost effective to install, requiring no specialised skills. Easy to maintain and retro fit to existing cable installations.

Lex Harvey
Tel: 013 712 3900
Cel: 083 454 4899
Lex@cablecroc.co.za
www.cablecroc.co.za

STOP CABLE THEFT

Innovative system to prevent cable theft

CABLE Croc is a mechanical system designed to anchor cables of various sizes and designs in the base of an excavated trench. Cable Croc's Lex Harvey says the system "is a once-off investment and does not require patrolling by security guards".

He explains that cables are latched to ground anchors that, in turn, are secured into the base of excavated trenches.

"Ground anchors are randomly spaced so as not to form a regular pattern," he explains, adding that the Cable Croc subsystems allow for multiple uses and, because the system is manufactured from durable materials "a life-long installation is ensured".

Harvey says that while the Cable Croc system is designed to secure cables in new installations, it is also suited to protect replacement cables. "Once a cable is exposed by thieves, two ground anchors have to be located in order to cut and

remove a relatively short length of cable. This is a major deterrent, which exposes thieves to a high element of risk. As the ground anchors have been randomly spaced, removal becomes a major time-consuming operation and opportunistic thieves are forced to move on to easier targets," he explains.

"From a material cost point of view, the additional material cost for an installation is the ground anchor assemblies."

There are two methods to secure ground anchors in the base of a trench, namely:

- The 'dry' method – hammering the anchor into the ground; and
- The 'wet' method – using a fast-setting chemical resin or quick-set ready-mix concrete.

"The labour content to secure the anchors using the dry method entails manual labour to hammer the anchors into the ground. The wet method entails

drilling a 400 mm deep hole in the base of the trench, placing the ground anchor into the hole, pouring the chemical resin/ grout into the hole and allowing the compound to set," explains Harvey. He says chemical resin takes 10 to 15 minutes to set while premix grout requires about 12 hours. "With both options the cable can be latched to ground anchors as soon as anchors are stabilised."

Harvey says that exposed cables can be protected with flexible stainless steel protectors. "Similarly, Cable Croc uses standard cable glands with modified lock nuts to anchor cables to enclosures."

The Cable Croc system is designed, patented and manufactured in South Africa and has been tested by the CSIR.

"Tests conducted by Walmart Technologies show that there are no adverse effects on the cables at the clamping area," assures Harvey.

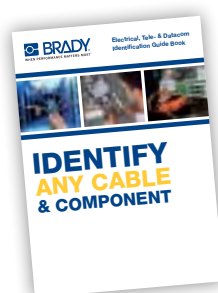
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BRADY 100

Low smoke zero halogen cable sleeve increases safety

BRADY has brought out a durable and compliant 'low smoke zero halogen' sleeve to identify wires and cables and that protects people in closed environments during a fire. "Our low smoke zero halogen sleeve passes EU and UK norms for smoke and toxic gas emission and it is useful to identify cables and wires in mass transit passenger vehicles or in public places," says Mario van Bever, global product manager materials wire ID at Brady Corporation.

Lethal smoke

In enclosed spaces, where it is difficult for people to be quickly evacuated, smoke and toxicity are often more lethal than the fire itself. "It is often problematic for people to be quickly evacuated from these closed environments and, to reduce the risk of toxic smoke poisoning during a fire in these confined spaces, it is essential to limit the release of smoke with toxic substances."

Well aware of this risk, national regulators established maximum



smoke emissions for materials used in railway passenger vehicles. "Our newest generation B-7641 Low Smoke Zero Halogen Sleeve passes the London Underground requirements through the BS-6853 Vehicle Category 1a norm, meaning the sleeve can be used to safely identify wires and cables in underground rolling stock."

Says Van Bever, "We have created a very durable wire and cable identification sleeve that offers new options to increase passenger safety for railway manufacturers and other suppliers."

Enquiries: +27 11 704 3295

Launch of UPS range to protect small and medium businesses in SA

JASCO Power Solutions has launched a new range of high frequency 1-10 kVA UPSs that will offer small and medium-sized local businesses the daily risk coverage they need to survive the load shedding that is likely to become the norm in South Africa. Jasco Power Solutions' Jnet range of UPSs are compact, flexible, meet international standards, and are extremely cost competitive.

This range complements Jasco Power's existing 20 – 100 kVA and 100 kVA to 1.2 MVA UPS ranges, and its power quality, assurance and management services.

"South African businesses can expect to deal with regular load shedding and the threat of rolling blackouts for the next three to five years," says Marco da Silva, MD of Jasco Power Solutions. "To remain viable, businesses will need to be proactive, putting in place solutions to protect their IT and operational systems and keep mission critical systems up and running."

The Jnet UPS come standard in a 19-inch rack and tower alterable design, and offers true online double conversion of power, which provides clean power and instant protection for precise instrument and network data

systems. The range will be available nationally via a selected base of Jasco Power Solutions resellers that are fully supported with training, design and technical inputs.

Exactly how much protection will a 10 kVA UPS provide?

A 10 kVA Jnet UPS will provide a five to 10 minute power backup window for up to 20 desktop PCs. This gives users the opportunity to shut systems down safely. It's a first line of defence but also provides a platform for extended protection and uptime.

Says Da Silva: "For companies that require it, we can extend the initial power backup period, powering systems for five to eight hours, as needed, with the addition of a generator. Using a combination of in-house manufacturing, local assembly and best-of-breed international products, we are able to design solutions to meet individual needs. We focus not only on providing products to solve power problems, but on delivering solutions that are energy efficient



themselves, ensuring maximum return on investment and minimum carbon footprint."

Says Da Silva, "As South Africa's previous experience with load shedding has shown, the cost of generators and UPSs are likely to escalate rapidly with the next wave of load shedding as businesses realise the full impact of

ongoing power loss. However, it is advisable not to buy in haste.

"The more effective strategy is to consider your options and build a bespoke platform that will cater not only to daily needs, but is also able to scale when required to deliver longer periods of power backup."

Enquiries: +27 11 746 6800

Preventative maintenance for generators reduces long term operating costs



Johnny Canada, technical service manager, Vert Energy, is rewinding an exciter stator, below deck on a vessel in situ, while the vessel is fully operational.

VERT Energy's service to the electro-mechanical power generation sector in Africa, encompasses the supply of dependable components to generator manufacturers, with the support of a repair and maintenance facility throughout the continent.

"The company's highly skilled technicians have the expertise to assist with inspections, diagnostics and repair procedures; re-assembly, installation and commissioning, as well as the implementation of preventative and predictive maintenance programmes," says Vert Energy's, managing director, Grant Robertson.

"It is important, especially in isolated locations, to have a secure and efficient power supply and a reliable support facility. For this reason, our on-site service offering is well received, particularly by companies in remote areas. This field service includes inspection and fault finding, as well as refurbishment and repair of most types of generator.

"Where repairs are not possible on site, work is undertaken at Vert Energy's Johannesburg workshop, or at a certified repair facility in Africa."

Apart from the company's 24-hour assistance with any emergency electro-mechanical breakdown or repair situation, Vert Energy also offers a customised preventive and emergency maintenance programme, designed to minimise the

downtime of either prime power or standby generators.

Proactive maintenance management not only increases reliability of a system, but also upholds consistent procedures and schedules and maintains the factory warranty coverage of every component. The company uses original spare parts and accessories, according to stringent OEM specifications.

Preventative maintenance for diesel engine generators also reduces long term operating costs and ensures extended service life of the system. By following diesel maintenance procedures and a manufacturer's recommendations, the risk of failure on critical power applications during start up is reduced.

Vert Energy's recent projects include the rewinding of a 750 kVA exciter stator, in situ below deck, on board a vessel out at sea near Mozambique. There were no interruptions to the normal operation of the ship. Vert technicians have also installed and commissioned the retrofit of new generators aboard a vessel in Namibia.

These units were tested under various loads and operating conditions out at sea. Other challenges involved the servicing and maintenance of three 7 000 kVA alternators at a gas turbine power plant in Nigeria and the restored operation of a faulty 800 kVA 525 V generator in Lesotho.

Enquiries: +27 11 453 9669

UPS for PCs and networking equipment new on local market

SCHNEIDER Electric has introduced the Back-UPS 500 uninterruptible power supply (UPS) to the local market. This move is of great significance in an environment where protecting electronic equipment from damage due to power outages, surges and spikes is a home and business necessity.

According to Gina Santos, distribution manager for Southern Africa at Schneider Electric's IT business unit, the Back-UPS 500 provides affordable power protection for both personal computers and networking applications, and features line-interactive technology with automatic voltage regulation (AVR).

"AVR instantly adjusts high and low voltages to safe levels for your electronics, so you can work indefinitely through sustained fluctuations.

The APC by Schneider Electric's Back-UPS is specifically designed to protect your equipment and network connection in harsh power environments, ensuring maximum productivity and

work efficiency," she explains.

The product carries the part number BX500CI in Southern Africa and its power button/ LED indicator and audible alarms allow the user to quickly understand the unit and power status through visual and easy to hear signals.

A 3' battery backup and surge protected IEC sockets keep critical electronic equipment running when the power goes out or fluctuates at dangerous levels, so you can protect your work and save your data.

"The Back-UPS 500's push button circuit breaker provides for easy recovery from circuit overloads and protects your fuse box and electronics from electrical damage," says Santos.

In addition, the product features automatic diagnostic testing, that is a periodic battery self-test provides early detection of a battery that needs to be replaced, ensuring the user's unit is ready when needed.

"Easy and straightforward to use with



a 'one step' battery connector, as well as free technical phone and online support, the Back UPS provides the customer peace of mind," adds Santos.

Enquiries: +27 11 254 6400

Efficient, true sine-wave power protection for entry-level servers and network equipment



SCHNEIDER Electric has expanded its entry-level Smart-UPS portfolio in southern Africa to include its APC Smart-UPS C 2 000 – 3 000 VA 230 V tower and rack uninterruptible power supply (UPS) models, ideal for servers, point-of-sale, routers, switches, hubs and other network devices.

Billed as the most affordable true sine-wave UPSs in the Smart-UPS family, the Smart UPS C is designed for entry-level servers and is compatible with today's active power factor corrected (PFC) power supplies. Included is also the PowerChute Business Edition software, compatible with all major server operating systems and providing UPS management and safe system shutdown.

Standard features include:

- LCD display: An intuitive interface provides comprehensive status information at a glance.
- Pure sine-wave output: Simulates the utility when on battery for optimum device compatibility.
- Advanced battery management: Temperature compensated charging extends life of internal batteries.
- High efficiency green mode: Saves utility costs and reduces heat

promoting longer component life.

- Network grade power conditioning: This offers automated voltage regulation, noise filtering and surge protection.

The Smart-UPS C also offer communication ports, including USB and serial ports for UPS management, and is safety-agency approved, which ensures that the product has been tested and approved to national standards.

It also has a generous number of outlets, all receptacles are surge and UPS output protected and its battery disconnect feature is a convenient way to disconnect battery for transport, especially in tower models.

"The Smart-UPS C truly brings the reliability of the world's most popular network and server UPS to entry level applications," says Bruce Grobler, IT Business director at Schneider Electric South Africa.

Enquiries: +27 11 254 6400



Legrand's new UPS system encompasses three ranges – the Modular series for a reliable power supply up to 120 kVA, the Conventional series up to 10 kVA and the Line Interactive series, which is a UPS system up to 3 kVA.

UPS range ensures continuity of service in diverse industries

NEW to Legrand's range of service sector solutions is an uninterruptible power supply (UPS) system, which enhances products – from structured cabling systems for data networks to control and management of the installation, including trunking and distribution systems.

"Legrand's environmental approach to constantly changing global markets encompasses ongoing technological developments of the company's extensive product portfolio. "Energy efficiency, quality power supply, optimum safety and enhanced aesthetics are critical in the advancement of all Legrand systems," says Luk Ivens, general manager, Legrand SA, global specialists in electrical and data building infrastructures. "The Legrand UPS system, which

ensures continuity of service for installations in diverse industries, provides reliable performance in terms of power and back up time.

"Optimum sizing of power stages, the latest electronic components and thorough testing of each unit, ensure dependability and safety of the new Legrand UPS system. High performance batteries and an efficient charging system have extended battery life by up to 50%."

This UPS system encompasses three ranges – the Modular series for a reliable power supply up to 120 kVA, the Conventional series up to 10 kVA and the Line Interactive series, which is a UPS system up to 3 kVA.

Modular series

The compact and lightweight Modular series, which is easy to transport, install and maintain, is designed for applications requiring easy expansion. This flexible system is made up of standard modules that be added to existing configurations to increase the power supply or backup time.

When necessary, power is easily expanded inside the cabinet, without having to reconfigure the installation or UPS. The backup time can be extended either by adding battery trays in the same cabinet or by adding another cabinet, depending on the power of the UPS and the backup time required.

This modular three-phase system consists of individual single phase modules, which are redundant and self-configuring, to enable power to be increased quickly and safely. Different levels of redundancy are easily obtained to ensure maximum continuity of service at all times.

An advantage of a three-phase power supply system with single-phase loads, is that in the event of a failure of one of the modules, there is no loss of power. Power continues to be distributed over the other modules that are still operational. With this system, it is also possible to create redundancy on each individual phase. If one power modules fails, the other modules for this phase take over. In a failure of a UPS that includes several control modules, continuity of service is assured by the automatic distribution of lost power over the other modules.

Conventional

Legrand's Conventional UPS systems are fitted with microprocessors for precise constant control of all measurements and the power factor correction circuit (PFC). This on-line double conversion UPS, which can be used in both tower and rack configurations, is available in three standard sizes, for power up to 10 kVA.

The main parameters of this system and the status of the UPS, including the battery charge level and faults, are displayed on the LCD screen.

Line interactive

The Line Interactive UPS – designed for safe and reliable power supply up to 3 kVA – offers protection for individual workstations, telephone switchboards and home automation applications, as well as for small service sector companies. This compact system, which is easy to install and configure, is fitted with an electronic voltage regulator, an LED indicator and telephone protection.

A range of communications accessories has been designed for managing and configuring the UPS, as well as for remote control of the system. These devices include network interfaces for real time control of the UPS and for managing numerous events that include no power, over-loads and by-pass problems. These network interfaces, with a 32-bit processor, do not require any external software.

Other accessories include sensors for monitoring ambient temperature and humidity, smoke detectors and fire safety controls, as well as air conditioning fault and intrusion detectors.

Communication and supervision software for accessing the operating parameters of the UPS and for carrying out full diagnostics and the configuration of specific functions, is also available.

Enquiries: +27 11 444 7971

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LED systems for industrial lighting and floodlighting

ACDC Dynamics, sole distributor of the Italian-designed Gewiss product ranges in southern Africa, has introduced the innovative Colosseum floodlighting range for industrial lighting and floodlighting applications.

"Intelligent lighting adapts to its environment by selecting the best solutions in terms of effectiveness and efficiency – for any application and in any environment," explains Charlton Opperman, the brand manager for Gewiss at ACDC Dynamics.

One product, many solutions

"The Colosseum range of floodlights is available with different optics up to 2 000 W – symmetrical, asymmetrical and circular, and with diffused and restricted beams. Gewiss offers multi-function compact indoor and outdoor floodlights with low, medium and high power to ensure reliability, design and high performance over the lifespan of the lighting solution," says Opperman.

He adds that the Colosseum floodlights "combine function with the most refined design requirements", such as the opening/closing handle system, which is used without tools, the vandal-proof lock system with its simplified installation and maintenance and all safety, control and light shielding accessories can be snap-coupled without using tools.

"The Colosseum system is suitable for pole installations for street or public area urban lighting; and the feed-through wiring between the floodlights ensures fast and easy installation.

"Furthermore, the system for fixing the bracket, with a graduated scale goniometer, makes it possible to easily obtain and maintain directions according to design parameters, maximising the lighting potential of the product," says Opperman.

Innovative solutions

"Innovation has always been a driving force for Gewiss," he says, "and this means developing new solutions to improve quality of life."

He explains that 'innovation' and 'invention' have different meanings: "Invention is related to an idea (inventors turn ideas into reality), while 'innovation' is related to practice.

"Innovation must be closely linked to the concept of 'value' – the usefulness, benefits and costs generated for

end-user customers on one hand and for companies on the other."

He says, "Gewiss has always focused on improving the quality and safety of its systems, choosing innovation as its strategy, proposing solutions that meet the needs of the market and anticipating its requirements.

"The Gewiss research and development department invests a considerable amount in its product ranges and has spent €140-million over the past 10 years on expanding its lighting product range," he adds.

Opperman will be in attendance at the ACDC Dynamics stand at the FESPA Lighting Africa Exhibition from 22 – 24 July at Gallagher Estate, Hall 1, Stands 20, 21, 23, 24.

Enquiries: +27 10 492 3100



Energy crisis creates opportunities for local retailers



"IT'S a sad reality that our country's load shedding days are far from over," says Paul Hubers, founder and director of the Sungrid Group, which develops, manufactures and distributes portable solar power and lighting products.

With over 20 years' international retail experience, Huber believes this situation is "opening up a whole new market and revenue opportunity for local retailers". He adds that the use of portable solar power and lights will go a long way towards alleviating some of this country's current energy woes and will simultaneously enable local retailers to meet consumers' needs.

"Answering market demand should be a retailer's first priority and, with power outages being experienced almost daily, local retailers have a new revenue stream just waiting to be explored."

Sungrid Group focuses on retail driven portable solar power and lighting solutions and has a growing retail client base. With a range of portable solar plug-and-play products it is offering South African retailers access to viable, cost-effective, sustainable and environmentally friendly alternatives. Hubers and his partners designed and manufactured a range of portable solar power and lighting products which come with easy to understand retail packaging and effective point of sale material for local retailers.

"Everything is easy when you know how and Sungrid Group offers an extensive training programme to ensure retail staff are best equipped to explain the value of this offering to its customer base."

"We work closely with our retail partners," continues Hubers, "and offer a full range of portable solar power and lighting products, with both on- and off-grid capability, able to meet any portable power requirement in domestic and outdoor environments."

He says that with Eskom's increasing inability to meet energy requirements is changing the way consumers use electricity – and this opens up the portable solar power and lighting markets.

Enquiries: www.sungridgroup.com

THE FUTURE IN A NEW LIGHT



Separate openings



Breather device



Floodlights



Colosseum Range

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GEWISS
LIGHT UP THE FUTURE

New lighting showroom offers practical applications and technical know-how



LIGHTING should never be an afterthought and careful consideration should be given to this important aspect of interior design because lighting can 'make or break' a room, says Major Tech's Werner Grobbelaar. "And the selection of appropriate lighting shouldn't happen at the last minute when the electrician asks about the location of sockets and the position of spotlights."

"Make time to plan and find exactly the right lighting then there won't be any regrets," he advises. "And don't assume that all that is required is a central, single down-light in a room."

He suggests that all the available options should be explored. "Illuminating your home

takes thought and consideration so that the end result is beautiful and practical. After all, finding that there is not enough light over the kitchen island unit can result in a costly modification to the lighting."

Grobbelaar says Major Tech has now completed its new, modern and functional lighting showroom to display the extended Major Tech lighting offer.

"Take time to browse through our lighting showroom and let our experienced sales people explain what is on offer in terms of illumination, light sources, dimming capabilities and other practical considerations so that you can make an informed choice of lighting," he says.

"Our new lighting range includes modern pendant lights that are perfect for kitchens, breakfast nooks, and centre island units but the focus here is not on practicalities alone. Kitchen lighting does not have to dull or boring and we have several lighting options available – our range of contemporary pendant lights offers more than adequate task lighting so they're not only practical and functional but are also stylish," he says adding that they can also be used successfully in homes, offices, bars, restaurants and hotels.

"Apart from offering ample illumination, they seem to bring along with them a balance of beauty and contemporary style. The acrylic lens pendant lights have 3 W LEDs and are available in cool white, warm white and RGB."

He explains that the RGB fittings are supplied with a remote control to change the colour manually or to select the desired colour changing program.

"The cool white and warm white versions are available with a dimmable function and in various shapes and sizes to suit different environments," he says, "and the beauty of LED is that there is no projected forward heat and the fixture always remains cool to the touch."

Features include:

- Machined and extruded aluminium housing.
- Impact-resistant clear acrylic lens.
- LED colours available: warm white, cool white and RGB (P2SA-30RGB / P2SA-31RGB).
- 100 cm cable supplied with light.
- Easy access to LEDs and drivers in cover plate.
- Different styles to suit various requirements and applications.
- Multi-volt: 85 V ac to 265 V ac.
- Easy to install with fixing bolts included.

Remember, getting the lighting requirements right the first time will save money in the long run.

To view a video of Major Tech's new modern lighting showroom go to: www.youtube.com/watch?v=A5soqhWj-U

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LEDs for mines

CONTROL Instruments-Automotive, the sole supplier of the VisionX range of LED lights for Southern Africa, has extended its LED lighting range to now include over 750 models.

Leonard Chester, product manager, says the applications now cover open pit and underground mining. The range includes structural lighting for areas such as workshops, roasters, wash bays, crushers, trucks, conveyor systems and lighting for large outdoor areas.

The Shockwave series provides a durable fluorescent upgrade alternative for flat-mount applications with a 150° lighting spread and the Solstice Prime Solo Pod gives area lighting for ladders, platforms and entrances.

Vision X's prime drive thermal management technology regulates the temperature of the lights to an exterior housing temperature of 55 °C. As a result, there is no risk of touch burns and the lower temperature gives the LEDs a longer life.

Chester says the LED lights provide a 70% reduction in power consumption over current OE lighting systems. "There is a 26% increase in light output on effective work areas (measured in lux on the work surface in 12 critical points) and an 80% decrease in light pollution based on stray light lost into the surroundings and into oncoming equipment."

The lights include a built-in redundancy to completely eliminate unscheduled maintenance.

Enquiries: +27 11 627 2500

Bringing the lighting industry up to date on LED technology

BEKA Schröder recently hosted a series of seminars to update its client base on the newly issued ARP 035 guideline, as well as on the latest developments in LED technology.

Almost 600 professionals and customers from various sectors of the industry, including municipal and electrical consulting engineers, attended the seminars that were held in Cape Town, Durban, Johannesburg, Polokwane, Gaborone (Botswana), Bloemfontein, Maseru (Lesotho), Nelspruit, Swaziland, and Pretoria. BEKA Schröder's Nadja Smith explains that the South African Bureau of Standards (SABS) recently re-issued the well-known 'Approved Recommended Practice (ARP) 035' document to include guidance on LED technology and the evaluation of LED streetlighting installations as compared to conventional streetlighting installations. "BEKA Schröder presented the seminars to motivate the use of LED technology in streetlighting applications," she says, adding, "The BEKA Schröder ARP 035 and LED technology update seminar has been validated by the SAIEE as per ECSA CPD policy and has been granted 0.5 CPD credits for attendees." Topics that were presented included:

- An update on LED technology and new product design features.
- Remote management of streetlight installations.
- ARP 035 guidelines.
- Comparing LED streetlight applications to HID being used on new and existing installations.
- Generating cost of ownership comparisons.

The following LED luminaires were showcased at the seminars:

- ZELA, a contemporary LED post top range.
- OMNIstar, a high-power LED luminaire for highbay or floodlighting applications.
- BEKA LEDlume family, a range of high-performance LED streetlights.

Smith says the seminars were "very well received" and the attendees gained a great deal of knowledge and understanding of the professional sustainable lighting solutions provided by BEKA Schröder.

Enquiries: +27 11 238 0094



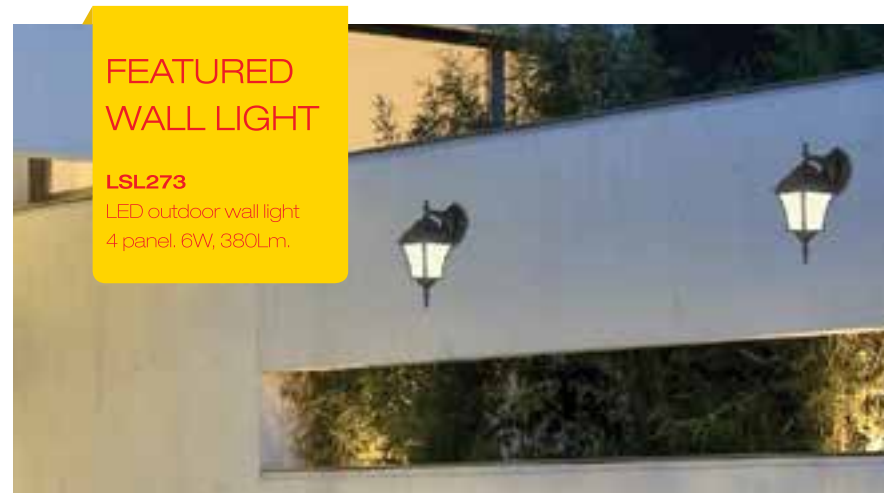
BEKA Schröder's LED products were showcased at the seminar.



The BEKA Schröder Seminar was held in Pretoria to update clients on new ARP 035 guidelines and LED technology.

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Radiant provides lighting and electrical solutions for all industries. We are focused on driving innovation and technology and are constantly expanding our range of products to effectively bring you lighting and electrical solutions you can trust.

We light up your life



New lighting GM appointed



Reggie Nxumalo has been appointed as general manager at Philips Lighting and will head the company's southern African lighting operations. In his new role, Nxumalo will be responsible for driving market share for Philips' lighting businesses across Southern Africa, including lamps, consumer luminaires and professional luminaires. "Intelligent lighting solutions are an integral part of today's high performance energy demands and with Reggie's proven track record and strength in leading diverse field organizations and business units, he has the right skill sets to further drive our solution and consumer-based market approach," said Thierry Boulanger, GM and vice-president at Philips Lighting Africa. "Reggie will play a pivotal role in ensuring that we partner closely with our customers and deliver the right solutions."

Enquiries: +27 11 548 2023

LED fluorescent tube replacement for electronic control gear

IN the coming months, OSRAM will be bringing the latest generation of Substitute T8 LED tubes to market step-by-step. The 'Value' variant has recently been made available for operation with conventional ballasts (CCG) or directly from mains voltage, and the 'Basic' and 'Advanced' versions of this construction design will follow shortly. All 'Basic' and 'Advanced' variants will bear VDE certification, and the entire new generation already complies with all specifications of the new, international safety standard for LED tubes.

From August, OSRAM will be offering LED tubes designed for operation with electronic control gear (ECG). This means that within the latest Substitute range, now in its fifth generation, the luminous flux levels of CCG and ECG models can be directly compared to ensure uniform lighting situations within hybrid installations. Substitutes can replace standard T8 fluorescent tubes simply and without rewiring and, in comparison, they cut electricity overheads by around two-thirds with up to five times the service life.

With the launch of the latest generation, OSRAM is extending the guarantee periods for the Value variant to three years and for the Basic variant to five years, which then matches the Advanced ver-

sion. Both last-mentioned variants have also been tested by the German Institute of Electrical, Electronic and Information Technology (VDE) regarding safety and health requirements, and bear the VDE seal representing maximum testing quality and safety standards in electrical engineering.

These two variants have also been designed for use in professional environments – Advanced for sales spaces and production locations also with extreme ambient temperatures from -20 to 50 °C, and Basic for warehouses, underground garages and corridors for example.

These two professional variants are also optionally available with rotatable end caps, enabling precise beam angle adjustment through 180°. The Value version is ideal for use in private applications, for example stairways, garages and cellar rooms, and was designed for cost-oriented lighting tasks.

Compared with their predecessors the latest generation of OSRAM LED tubes are up to 15% more efficient. This development was primarily made possible via an improved heat dissipation concept, the use of more efficient LED chips and the optimised control of these.

Enquiries: +27 11 207 5600



Africa LED Expo launches a 'must see' show of lighting

THE Africa LED expo is a focused International exhibition for professionals to see the latest developments and innovations in the LED lighting industry. The expo will take place from 22 to 24 July in Hall 1 at the Gallagher Convention Centre, Johannesburg.

"LED lighting is driving the most significant transformation in lighting technology since Edison introduced a commercially practical light bulb

over 130 years ago," says Dyelan Copeland, expo organiser.

"This was further confirmed when three Japanese scientists, Isamu Akasaki, Hiroshi Amano, and Shuji Nakamura, who invented the first efficient blue LEDs in the mid-1990s received the 2014 Nobel Prize in Physics in November," he explains. "Their invention of a blue light emitting diode, or LED, was a milestone that now serves

in white-light bulbs, computer and cell phone displays, billboards and hundreds of other applications. The uses are growing and the invention has dramatically changed the landscape of the lighting industry, ultimately creating valuable investment opportunities in less obvious areas."

According to industry watcher, IHS Technology, since the invention of the blue-light LED, the market has grown to more than 90% of all displays sold and "will account for 32% of all bulb revenues in 2014."

Copeland says that according to some estimates, "LEDs could occupy as much as 80% of the lighting market by 2020".

He says that LED sources have become the "number one efficiency recommendation" when improving lighting energy performance.

"LED lighting has been high on the wider energy efficiency agenda for several years, but right now no other technology change offers the same level of power reduction, whilst maintaining or improving on operational performance," he says.

Exhibitors will have an opportunity to share knowledge and products so that best practices can be communicated to stakeholders and visitors can attend lighting lectures at the conference hosted at the exhibition.

The event will focus on:

- Architectural lighting;
- Decorative lighting;
- Commercial lighting;
- Entertainment/gaming lighting; and
- Industrial lighting.

Visitors to the expo will include architects; lighting designers; commercial property owners; electrical engineers; the hospitality industry; casino/gaming industry; and illumination professionals.

Exhibitors will have an opportunity to share knowledge and products so that best practices can be communicated to stakeholders and visitors can

attend lighting lectures at the conference hosted at the exhibition.

Copeland explains that the LED expo will be co-located with Sign Africa with its own dedicated area and as "a distinct synergy" with the various applications of products such as printed wall coverings, printed window graphics, way finding signage, Plexiglass, Perspex and other composite materials used with signage and building design.

Entry to the show is free. Visit www.africalexpo.com to register online or email info@africalexpo.com

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AFRICA
LEA
EXPO 2015

HID replaced with LED floodlights

AS security can be an issue in residential and commercial environments, Enlite has brought to market its Helius range of LED floodlights with optional PIR. A perfect replacement for HID, all Helius floodlights feature a high power COB LED chip and are great value for money, even in cost-sensitive installations, says Paul Johnson, Aurora's international development director.

Helius 10 W – 200 W LED floodlights

With the slim profile and clean black finish, the Helius™ range of floodlights is perfect for residential and commercial applications. Manufactured in die-cast aluminium housing, tempered glass provides excellent, additional protection. Adjustable and IP65 rated, Helius comes in 10 W, 30 W, 50 W, 100 W and 200 W, delivering up to < 14 000 lumens. The lifetime is 25 000 hours to L70, with a two-year warranty.

HeliusPIR 10 W – 50 W LED floodlights

The HeliusPIR range of floodlights offers an added measure of reassurance that PIR brings, especially where residential and/or commercial security is an issue says Johnson. The adjustable PIR sensing head allows for di-

rect positioning to ensure optimum motion detection and lighting fields are achieved. Helius offers a PIR detection distance up to 12 m with a detection range of 120 ° for the 10 W, and 180 ° for the 30 W and 50 W floodlights. Durable, high-quality paint minimises the impact of any corrosion. Delivering up to < 3 750 lumens, lifetime is 25 000 hours to L70, with a two-year warranty.

New for 2015

Johnson says Aurora has added many new products to its Enlite brand of value-driven LED lamps and luminaires, which sell at competitive prices. "Quality always counts

with Aurora so Enlite lighting essentials are manufactured to Aurora's reputable high-quality standards, which means there is no need to sacrifice safety and quality," he adds.

The full new range of innovative products – including floodlights, GU10/MR16 ICE™ lamps, Uni-Fit™ commercial and low profile downlights, flat panels, T8 tubes, bulkheads and more – are featured in the second edition of the Enlite catalogue.



Enlite's Helius™ adjustable floodlights (with optional PIR) are durable, unobtrusive and make a perfect replacement for HID.

Enquiries: +27 11 234 4878

Source quality products at Chinese B2B fair

THE China Homelife Fair, which forms part of a global portfolio of Chinese product fairs, will be debuting in South Africa at the Sandton Convention Centre in Johannesburg from 1 to 3 September.

Binu Pillai, chief operations officer for Meorient International Exhibitions, says this business-to-business trade exhibition will offer buyers from around southern Africa the exclusive opportunity to source quality products from 250 superior Chinese suppliers.

"Based on the portfolio's 10 years' of global experience, China Homelife Fair South Africa intends to be the biggest platform for sourcing Chinese products in Southern Africa, providing comprehensive services for both visitors and buyers," he says.

The China Homelife Fair is organised by Meorient, a leading facilitator of Chinese business, and takes place annually in nine cities around the world – Sao Paulo, Istanbul, Dubai, Mumbai, Poznan, Cairo, Amman and Kazakhstan – and now in Johannesburg. "The China Homelife Fair portfolio aims to connect well-established Chinese suppliers of quality products with regional buyers," says Pillai.

"The fair will welcome visitors from South Africa as well as Botswana, Namibia, Mozambique, Swaziland, Zimbabwe, Zambia and Malawi.

Pillai says the company is looking forward to introducing the African market to the suppliers and their quality products. "One of the key differentiators between this show and its competitors in the African market is the quality of China Homelife's exhibitors. All exhibitors have been selected via a strict quality control process so as to ensure the products displayed are the best from China, and meet the high quality demands of international buyers," adds Pillai.

He says this year's inaugural show will have a dedicated focus on eight product segments: furniture; home appliances; textiles and garments; kitchen and bathroom; garden and leisure; gifts; lights and lamps; and escalators and elevators – all from leading manufacturers and suppliers.

"To ensure efficient networking and successful negotiations at this year's fair, the 'Match-Making programme' will assist buyers in meeting the right suppliers and finding the right products to meet their business needs via prearranged meetings," says Pillai, adding that a dedicated area on the show floor will offer free translation services between regional buyers and Chinese suppliers.

He says that when the first China Homelife Fair South Africa 2015 enters the southern African market, it will "set itself apart from other trade shows of its kind by connecting buyers with the right sellers and by offering high-end, quality products".

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drawing.

EES Africa



Rob Anderson
Executive director
on the
board, EES Africa.

Bright Spark

A match puzzle

The Volley and Smashem Tennis Club was holding its annual knockout tournament. The organisers were planning to have exactly 32 entrants, which would mean 16 players reaching the second round, eight getting into the quarter finals, four making the semi-finals and two reaching the final, just like Wimbledon.

Unfortunately, the club president's two nieces and the secretary's brother turned up at the last moment and had to be accommodated. "Thirty-five players. How awkward," said the gentleman planning the draw. "There will have to be some byes into the second round, and into the third round. I wonder how many matches will have to be played now, if we play as few matches as possible?"

Can you help him?

June solution

Long distance travel

Harry Hoppit was setting out for roughly the opposite point on the globe to London, so it made no difference in which direction he set out – he would have travel halfway round the earth to get there. In fact, the points exactly opposite London on the earth is in the sea, so it is reasonable to suppose that he was flying to somewhere in South Island, New Zealand.

AUGUST FEATURES

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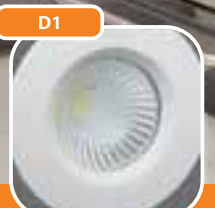
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