



sparks

electrical news

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FEATURES

- Energy measurement and supply 14
- Tools and instruments 15-17

REGULARS

- Contractors' corner 2-9, 12-13
- Buyers' guide 10-11
- Lighting 18-19
- People on the move 20

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Barend Niemand, the new CEO of the Comtest group of companies, with Val Verwer (marketing director) and Peter Verwer (chairman) who retires in March.

New CEO appointed

BAREND Niemand has been appointed CEO of the Comtest group of companies, succeeding Peter Verwer, who retires in March 2015. This news was announced at Comtest's 10th anniversary celebrations

From modest beginnings in 2005 and a staff complement of only eight, Comtest has flourished and now employs over 55 members of staff.

"Our key partners back then were Fluke and Midtronics," says Niemand.

"Comtest won Fluke's international awards for 'best newcomer' and 'best distributor' in 2005 – the first start-up company ever to have done so. In 2010, Comtest acquired Instrotech and Calog, effectively launching them into the process control industry," Niemand recalls.

"Comtest today represents 30 specialist test and measurement companies from all over the world and in most industries."

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ECA(SA) joins forces with Safehouse

THE collective force of the Electrical Contractors' Association of South Africa's 5 000 members will add significant clout to the Safehouse Association's aims: to clean up South Africa's electrical industry.

The ECA(SA) officially joined Safehouse on 1 February – a decision that was unanimously adopted at the ECA(SA)'s national executive meeting in November last year after "months of discussions" between the ECA(SA)'s national director, Mark Mfikoe, and Pierre Nothard, chairman of the Safehouse Association.

Nothard says it is "a particularly good development" for Safehouse to have the ECA(SA) as a member because of "the extent of its membership in the industry, and the influence that contractors have in the selection of electrical products and compliance with installation regulations".

"It is our intention that the ECA and the Safehouse Association will work together and implement joint initiatives to combat the prevalence of sub-standard products and services in the country," says Nothard.

He adds: "I am particularly pleased to get electrical installations within the ambit of Safehouse's awareness campaign and other activities; and I hope to get considerable input from ECA(SA) members in this regard."

Nothard has high hopes for the Safehouse Association's alliance with the ECA(SA). He stresses, "It is important for the ECA(SA) to see results from its membership and, likewise, Safehouse would be disappointed if the ECA(SA)'s membership did not make a considerable contribution to the fight against the scourge of sub-standard products and services."

Mfikoe is optimistic that the ECA(SA) members will become strong allies of the Safehouse Association and provide feedback on substandard products so that Safehouse can act swiftly to have them removed from the market if they are found to be unsafe.

He says that, in line with the Safehouse objective "to educate the supply chain and end-users", Safehouse will inform ECA(SA) members about products that have been found to be unsafe.

Mfikoe says ECA(SA) members adhere to the 'Hand of Safety' motto, which includes using safe and approved products, ensuring the integrity of installations and the safety of the end-users.

"Our members work with electrical products every day and they know when products adhere to standards and when they do not – and our members know which companies are selling sub-standard products," explains Mfikoe.

The implications of the ECA(SA)'s membership of Safehouse and the impact it will have on contractors is being conveyed to

members through the ECA(SA)'s various regional offices.

"Our members will be the eyes and ears for Safehouse; provide feedback and, if necessary, initiate investigations into unsafe products and services by Safehouse. The ECA(SA) will monitor any investigations as well as any action taken against non-compliance."

Mfikoe adds: "Our members know they do not have to tolerate sub-standard products and lose money on projects. We are looking forward to action being taken against non-compliance for the benefit of members and the public alike."

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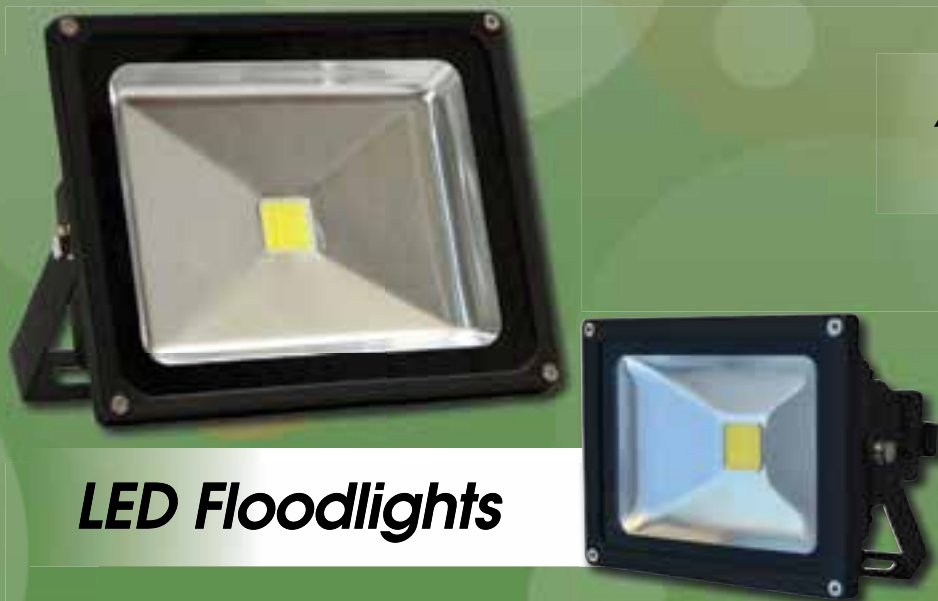
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Personality of the Month



Werner Grobbelaar.

WERNER Grobbelaar has been the sales manager at Major Tech for seven years and is indisputably a much valued member of the management team.

He is the epitome of the expression, 'still waters run deep' and Werner's calm exterior conceals great depth of character, a fine intellect and a quirky sense of humour. While he admits to being "the quiet one" he has forged healthy lines of communication. His leadership strength comes from knowing that the secret of successful delegation is identifying the team's strengths and capitalising on them; and that getting down in the trenches and working alongside everyone else is great motivation for any team.

Sparks: Where were you educated?

WG: I was born and raised on the East Rand – Springs to be more specific, but I don't tell many people about that. I attended Springs Technical High school and matriculated in 1992 ... whoops, I gave away my age! My main subjects in high school were focused on the electrical sector – higher grade (*nogal*). I have done a few short courses – one in IT, which is a hobby of mine, and I have also done a certificate course in management at GIBS.

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

WG: My dad is a master electrician so pretty much my entire life. Officially, 23 years.

Still waters run deep

Sparks: When and where did you start your career?

WG: After school I worked for Bee Gee Electrical Wholesalers in Springs for about eight years where I learnt a lot about the industry, products and the people involved. In 2000, I moved to a company that specialises in energy saving, and joined Major Tech in 2004.

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

WG: The greatest changes have been in the quality of workmanship – or the lack thereof. My dad, Louis, taught me that you either do it right, or you don't do it at all. I recall many smacks on the head for not getting this simple instruction right.

Nowadays a lot of qualified people are looking for the cheapest option, which compromises their workmanship.

Sparks: What major projects have you worked on and what is your greatest accomplishment?

WG: Moving up in life is a project, isn't it? Where I am today is one of my greatest accomplishments: 20 years ago, I would never have dreamed of being where I am right now. Being respected and an asset to the people I work with feels great.

Working for Pat Shaw and Wayne Ternent is also amazing and it's not the kind of environment that you would find anywhere else.

Sparks: Have you won any awards?

WG: Nope. I'm the quiet one.

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

WG: My dad. A lot of my knowledge of the practical side of the electrical industry comes from my dad. He is, still today, the hardest working person I know and probably the only person I trust when it comes to electrical installations and advice. Other people who have inspired me are my previous employers, Cliff Carr and Derek Waters who have dedicated their lives to their successful business and, of course, Pat Shaw, my current boss, who owned his own company at pretty much the same age as I was when I left home; he's a true entrepreneur.

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

WG: The biggest challenges are inferior quality products and the lack of enforcement from the regulators.

Sparks: What do you enjoy most about your job?

WG: Working with people. I thrive when I am among people and enjoy the hustle and bustle of a working week. On weekends I need to be alone so that I can recharge; my wife understands that and supports me (not that she likes it) but I get cranky if I don't.

Sparks: How do you motivate your staff?

WG: I learnt early on that every person needs to be treated in a different, special way. I don't shout at anyone, ever. (I lie; I do shout at stupid people when I'm driving.) I believe that discussing problems and addressing issues face to face always resolves conflict. Sometimes, I suggest that I would have done things in a different manner, and I get results.

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

WG: No. I would not have met my lovely wife if I had gone to university. I was extremely shy at school and even afterwards, and I would not have become the person that I am today if I had not spent all those years working at a trade counter and on the phone dealing with people.

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

WG: Yes. We need people with skills in any industry who want to make a difference.

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

WG: We are all human and we all make mistakes. Honesty goes a long way.

Sparks: What is your favourite quote?

WG: "To be, or not to be". No, really, "Coffee solves everything." No, seriously, Ghandi's quote: "Live as if you were to die

tomorrow. Learn as if you were to live forever".

Sparks: Name three things on your 'bucket list' (things you want to do before you 'kick the bucket').

WG: Climb a mountain (not anywhere near snow, I've seen too many movies where it's gone bad); fly a helicopter; and travel abroad.

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ISO 9001 awarded to lighting manufacturer



After a demanding and laborious process that took two years, lighting manufacturing company, Magnitech, received its ISO 9001:2008 Quality Management Systems accreditation from the South African Bureau of Standards in February. Seen at the presentation that took place at Magnitech's Benrose factory are: Amar Singh (general manager); Cyril Berman (joint CEO); Karel de Villiers (general manager, engineering certification, SABS); Howard Page (joint CEO); and Petrus Joubert (quality manager). The accreditation was awarded to Magnitech for the design, manufacturing, sales and supply of industrial and domestic electrical lighting products with no exclusions

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Working knowledge by Terry McKenzie-Hoy

Dispelling the myths, misconceptions and blatant untruths about backup power

DURING the Second World War, Britain relied heavily on supplies shipped in from the USA, South Africa, Australia, and other countries. If these supplies could be stopped, Britain would lose the war and, the way to stop the supplies was to sink British ships – and German submarines would sink them with torpedoes. The German submariners called this 'The Happy Time'.

We now have our own electrical 'happy time' – or at least the sellers of generators and uninterruptible power systems (UPSs) do. Never before have

so many gensets and UPSs been sold in such a short space of time. And, never before have more misconceptions, myths and blatant untruths been passed onto a gullible public by people hopelessly unqualified in electrical engineering.

Let's begin with a few facts:

Power factor: Most houses run at a power factor (the ratio of apparent power in kVA to real power in kW) of 1. Thus, if your house draws 3 kW you need a 3 kW generator to run it. If you buy a 5 kVA generator, which is rated at a power factor

of 0.5, then it is only good for 2.5 kW (0.6 x 5 kVA) and it is the same output if the set is 4 kVA at 0.62 power factor. If this confuses you, don't worry. All you should know is that the kVA of a set is not a good measure of the power it can produce – it is the watts or kilowatts, which is kVA x power factor (this is displayed on the label of the set), that is important.

Diesel versus petrol generator? A diesel generator is cheaper to run but small sets (less than 5 kVA) are not usually available in the diesel option.

Running a generator in parallel with the mains power: This is not a good idea and don't try it unless you really know what you are doing.

Fuel consumption: This varies but in general, a diesel set uses 250 ml of fuel per kWh while a petrol set uses about 300 ml per kWh. A medium-sized middle class house uses about 13 kWh per day with the geyser and about 10 kWh without it.

Sizing of a generator for your business: This is a difficult topic but the rule is 'don't make it bigger than you need'. Look at your power account – you will see the total power consumption of your premises in kWh (sometimes written as 'units consumption'). Typically the so-called 'load factor' of your premises (if the company work days only) will be about 20%. Thus, the maximum kilowatts the generator has to supply is about 154 (total power consumption in kWh).

For example, if your factory uses 650 kWh per month, you will need a generator that is rated at about 4.2 kW or about 6 kVA. If you use 2 600 kWh in a month, you need a set of about 17 kW or 20 kVA.

Load factors vary, however. If in doubt ask an engineer to look at your power bill and make a recommendation.

Things to do: Remember that when the power fails a whole lot of things happen, which may result in a shortage of fuel so it is important to keep some fuel in storage. It goes without saying that stored fuel should be locked up safely or in a properly designed fuel tank. If you have a 30 kVA diesel generator and a 500 litre storage tank then you have 2 000 kWh available (remember, 250 ml fuel per kWh). The 30 kVA set at half load will use it all in about 150 hours. Check this.

Exhaust silencers: Ensure the set is where it can get enough cooling and combustion air. Remember that the exhaust silencers sold with most sets are not very good and will create noise, which may disturb neighbours. If necessary, purchase a purpose-designed silencer.

Certificate of Compliance: Remember that even if the generator is only going to be used for standby power, the electrical connections and arrangement must still have a Certificate of Compliance (CoC) and, if the set is going to supply more than five consumers, the CoC must be signed by a registered person (Pr Eng; Pr Tech Eng; or Pr Cert Eng)*.

And, finally, remember to keep the starting battery charged.

Good luck.

**In South Africa Professional Engineers are recognised by the post-nominal Pr Eng for engineers holding a B.Eng., B.Sc. or B.Sc.Eng. with relevant experience, and by Pr Tech Eng (Professional Engineering Technologist) for engineers holding a B.Tech with relevant experience and three years of practice. Professional Certificated Engineers are recognised by the post-nominal Pr Cert Eng for engineers (holding one of seven Government Certificates of Competency as an engineer or mine manager) with relevant experience.*

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Getting to grips with SANS 10142-1 by Hannes Baard

The return of the Dark Ages – who switched off the lights?

WHEN I was a young boy it was a bit of an issue for me to visit my grandparents who lived in Namaqualand. Coming from the city, it felt as though I was stepping back into the 'Dark Ages'. My grandparents earned a living off the land and relied on their Aga wood-burning stove for hot water; paraffin for lighting; and water dripping over charcoal for refrigeration. There was no television, just a 'valve radio' powered by a car battery, which was charged by a wind-driven charger my granddad built using a motor car's generator with a wooden 'propeller' attached to it and placed on a disused windpomp tower.

Many years later, I couldn't get enough of escaping from civilisation to spend some time 'chilling' in the bush or desert somewhere where there are no modern conveniences such as electricity and cell phone reception. It was 'heaven on earth' to sit under a starlit sky in the middle of nowhere with a wood fire and car batteries providing the energy for living 'off the grid'. It was at these times that I realised I actually missed the uncomplicated life my grandparents had led.

Yes, it was nice to come back to 'civilisation'

after a couple of weeks in the bush, but I never thought that the day would come when I would have to live without all the 'mod cons' again. Well, today I'm back in Namaqualand 50 years later and relying on a battery so I can do my work and a candle to see what I'm doing... but this is most definitely not of my choosing.

I never imagined that I would look at an entity – one that I held in the highest regard 15 to 20 years ago – as the single biggest culprit that has been responsible for plunging our beloved country back into the Dark Ages.

And, on top of all this, when I read Sections 22 and 24 in the Occupational Health and Safety Act (Act 85 1993) the questions just continue to mount up.

The Occupational Health and Safety Act (Act 85 of 1993) states:

22. Sale of certain articles prohibited.

Subject to the provisions of Section 10 (4), if any requirement (including any health and safety standard) in respect of any article, substance, plant, machinery or health and safety equipment or for the use or application thereof has been prescribed,

no person shall sell or market in any manner whatsoever such article, substance, plant, machinery or health and safety equipment unless it complies with that requirement.

I would say that I started to seriously doubt the integrity of Eskom (from what it was previously), way back in 2012 when I attended an Electrical Contractors' Association meeting in Cape Town. An Eskom representative boldly announced Eskom's plan to save electricity: issuing and installing, free of charge, millions of CFL and LED light bulbs of all shapes and sizes. I challenged the Eskom representative by referring to Section 22 of the OHS Act, which states that only items that are compliant may be used in an electrical installation, and informing him that 90% of the light bulbs Eskom was handing out freely were not, in fact, compliant. The Eskom representative went pale and, needless to say, when the meeting was over, he left in a big hurry without addressing my concerns. I then wrote letters to the Department of Labour and to Eskom about this matter but these remain unanswered to this day.

23. Certain deductions prohibited.

No employer shall in respect of anything which he is in terms of this Act required to provide or to do in the interest of the health or safety of an employee, make any deduction from any employee's remuneration or require or permit any employee to make any payment to him or any other person.

All this Section says is that an employer cannot deduct money from an employee's remuneration if, for example, the employer needs to install a dust extraction system to comply with legislation.

24. Report to inspector regarding certain incidents.

(1) Each incident occurring at work or arising out of or in connection with the activities of persons at work, or in connection with the use of plant or machinery, in which, or in consequence of which:

(a) Any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or to continue with the activity for which he was employed or is usually employed;

(b) A major incident occurred; or

(c) The health or safety of any person was endangered and where

(i) A dangerous substance was spilled;

(ii) The uncontrolled release of any substance under pressure took place;

(iii) Machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or

(iv) Machinery ran out of control, shall, within the prescribed period and in the prescribed manner, be reported to an inspector by the employer or the user of the plant or machinery concerned, as the case may be.

(2) In the event of an incident in which a person died, or was injured to such an extent that he is likely to die, or suffered the loss of a limb or part of a limb, no person shall without the consent of an inspector disturb the site at which the incident occurred or remove any article or substance involved in the incident there from: Provided that such action may be taken as is necessary to prevent a further incident, to remove the injured or dead, or to rescue persons from danger.

(3) The provisions of subsections (1) and (2) shall not apply in respect of

(a) A traffic accident on a public road;

(b) An incident occurring in a private household, provided the householder forthwith reports the incident to the South African Police; or

(c) Any accident which is to be investigated under section 12 of the Aviation Act, 1962 (Act 74 of 1962).

(4) A member of the South African Police to whom an incident was reported in terms of subsection (3) (b) shall forthwith notify an inspector thereof.

Section 24 really makes the hair on the back of my neck stand up. Considering all the incidents that have occurred at Eskom power stations lately, one has to wonder how many of them were voluntarily reported to the Department of Labour via an inspector of the Department.

Section (1) (c) (i to iv) reads like a script for a horror movie that could have been written for at least four Eskom power stations. And, if you Google 'Eskom safety incidents', the story becomes even more scary.

Until next time, keep the flashlight nearby.

Shedding light on electrical installations

ELECTRICAL distribution equipment powers practically every business on the planet. As such, it is the lifeblood of a business and is responsible for maximising production levels by increasing installation availability and quality, as well as improving a business' operational expenditure and optimising its capital expenditure.

Few businesses, however, have a clear understanding of how to maintain their equipment optimally or how to predict dangerous and costly faults, especially when electrical infrastructure is not the core focus of the business. Unfortunately though, this puts these businesses on the back foot in terms of competitiveness. Furthermore, it opens up risk avenues in terms of cost, and threats to the building due to an increased possibility of electrical faults leading to safety risks for employees.

"To minimise these risks for organisations, Schneider Electric created 'MP4' services, which assess the performance of customers' electrical installations and propose improvements to meet their business energy needs," explains Roland Bartle, business development manager for the Mining, Minerals and Metals (MMM) industry in Southern Africa at Schneider Electric, a global specialist in energy management.

Maintenance

The MP4 methodology is based on four steps, producing four detailed plans per customer: The maintenance plan aids in the development of a tailored maintenance schedule to ensure the right type of maintenance is applied for each piece of equipment and to minimise equipment downtime. The plan also identifies which maintenance operations the customer can complete and which require a service specialist. "A tailored maintenance plan also helps to keep maintenance costs optimal," says Bartle.

Modernisation

The modernisation plan indicates which equipment needs to be modernised, and when. It includes guidance for managing equipment end-of-service life and obsolescence (through

replacement or retrofit) as well as suggestions for improving installation performance (by altering the electrical architecture).

Monitoring

The monitoring plan recommends a strategy to implement a monitoring system, taking into account the customer's specific requirements. It includes an assessment of existing monitoring capabilities and clear recommendations on where, how and why to improve monitoring.

Management

Lastly, is the management plan, which focuses on organisational aspects of operating and maintenance activities. It also reinforces the technical recommendations provided by the other three plans, providing economic control over the recommendations.

The management plan also addresses obsolete equipment and end-of-life steps, spare parts policy and procedures, operating conditions and maintenance contracts, organisation and training of technicians, and a follow-up of the action plan.

Since 2005, when MP4 services were first introduced by Schneider Electric, more than 400 customers, from industries as diverse as buildings, electric utilities, healthcare, industries, MMM, and oil and gas, have undergone MP4 assessments.

The organisation's MP4 services provide customers with a full assessment of their electrical installations, as well as a clear action plan. In addition, customers receive a list of critical safety issues to be addressed. Bartle highlights that the benefits of MP4 services include improved employee safety, enhanced quality and performance, greater reliability and peace of mind.

"With MP4 services, our customers are provided with a detailed vision of the status of their electrical distribution installation, and four concise plans to help guide them in the future. This helps them to plan maintenance accordingly and avoid costly downtime," adds Bartle.

"The value of this is clear, it's peace of mind and the freedom, allowing our customers to focus on their core business," he says.

Enquiries: +27 011 254 6400

Remote wireless test tool system

THE Comtest Group, Fluke's authorised test and measurement distributor for South and southern Africa, has introduced Fluke CNX, a customisable, troubleshooting set of wireless test tools that work together, recording live measurements remotely and simultaneously on a single screen. CNX modules measure ac voltage, temperature and ac current with a standard clamp or flex clamp.

Possible applications include:

- Detection of power interruptions.
- Single phase measurement.
- Determining current imbalance.
- Measurement of incoming current.

A wireless multimeter displays readings from up to three wireless modules, plus the meter measurement at the same time, on the same screen, from as far as 20 m away. To get a holistic overview of the situation, readings from 10 tools' measurements can be reviewed simultaneously on PC View. Users are able to mix and match the wireless-enabled modules to suit their unique measurement needs.

The CNX system can record up to 65 000 sets of min/max/avg readings in either single or multiple logging sessions. CNX isolates intermittent events

or records signal fluctuations automatically, using the module's log function. Measurements can be viewed in a location separate from the point of measurement, for safety purposes, as well as be viewed repeatedly from either remote locations or on site. Fluke CNX meets Category 1000 V CAT III and Category IV 600 V safety standards.

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Best practices in lightning safety and lightning protection seminars

INDUSTRY specialist consultants INNOPRO are presenting its updated one-day industry-briefing seminar on 'Best Practices in Lightning Safety and Lightning Protection of Structures and Systems' in Centurion on 27 March.

"Lightning safety and lightning protection are topics that are often misunderstood, with inappropriate management, strategies, techniques and methodologies being applied. The consequential effects can be severe, both in terms of direct effects and injuries and the indirect and consequential impacts – including lost production and other effects," explains Ian McKechnie, MD of specialist consultants and forensic engineers INNOPRO.

"The appropriate application of effective lightning safety and lightning protection strategies and solutions for infrastructure, industry and other sectors are therefore of critical importance".

The seminars will be presented by Ian Jandrell and Ian McKechnie, both directors of Innopro. Ian Jandrell is a Personal Professor, CBI-electric Professor of Lightning, and Dean of the Faculty of Engineering and the Built Environment at the University of the Witwatersrand. Ian McKechnie is an Honorary Research Fellow at the School of Electrical and Information Engineering at the University of the Witwatersrand.

These seminars are validated for Continuing Professional Development (CPD) with the Engineering Council of South Africa (ECSA) and by the South African

Institute of Electrical Engineers (SAIEE) and attendees will earn one credit in the compulsory Category 1.

The seminar is aimed at industry practitioners at all levels and will be beneficial to those involved in design, engineering, management, operation, insurance, risk assessment and maintenance of infrastructure and systems that can be affected by lightning and the related electromagnetic interference.

McKechnie adds that health and safety practitioners and other persons responsible for safety at facilities and activities would also find the seminar beneficial.

Limited space is available at the seminars and pre-booking is essential.

Further information and registration forms are available from www.innopro.co.za.

Enquiries: +27 12 663 4804



Energy courses 2015

THE Energy Training Foundation (EnTF), the affiliated training provider for the South African Association for Energy Efficiency (SAEE) has announced its training schedule for 2015. The EnTF is the sole approved training provider of the Association of Energy Engineers (AEE) in the USA for the southern African region.

- All trainers are AEE certified and accredited to train.
- AEE training carried ECSA CPD credits.
- AEE certification qualifications are recognised in 90 countries.
- AEE required re-certification every three years through continuous learning.

Training schedule

Certified energy manager (CEM)

Five CPD credits / 7.2 AEE credits

Johannesburg: 16 – 20 March 2015

Cape Town: 25 – 29 May

Johannesburg: 19 – 23 October

Certified Measurement and Verification Professional (CMVP)

Three CPD credits/3.2 AEE credits

Johannesburg: 17 – 19 March

Cape Town: 26 – 28 May

Johannesburg: 20 – 22 October

Certified Energy Auditor (CEA)

Four CPD credits / Four AEE credits

Cape Town: 5 – 8 May

Certified Renewable Energy Professional (REP)

Four CPD credits/4.8 AEE credits

Port Elizabeth: 28 – 31 July

Johannesburg: 27 – 30 October

Energy Management Systems

Implementation (EnMSI) – ISO 5001:2011

Two CPD credits/2.8 AEE credits

Johannesburg: 19 – 20 October

Fundamentals for Energy Management

Training (FEMT)

Three CPD credits/4.2 AEE credits

Johannesburg: 23 – 25 February

Cape Town: 4 – 6 May

Johannesburg: 7 – 9 September

Measurement and Verification Standard of

South Africa (MVST-SA) – SANS 50 010:2011

CPD pending/1.8 AEE credits

Johannesburg: 16 March

Cape Town: 25 May

Johannesburg: 19 October

CEM Exam Preparation

1.8 AEE credits

Johannesburg: 26 February

Cape Town: 7 May

Johannesburg: 10 September

SUNCY PV Solar Intro

1.8 AEE credits

Johannesburg: 20 March

Cape Town: 29 May

Johannesburg: 23 October

ISO 14001 Environmental Implementation

Training (EIT)

CPD pending/2.8 AEE credits

Johannesburg: 21/22 October

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SUB-STANDARD ELECTRICAL PRODUCTS AND SERVICES CAN CAUSE FIRE, INJURY AND DEATH



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There are many sub-standard products and services on offer in South Africa, usually at seductive prices and in contravention of laws which are promulgated to protect people. Providing such products and services is a crime. Using them is irresponsible.

If you are not sure of the product or electrical contracting service** you are considering using, use those provided by Safehouse members.

Membership of the Safehouse Association is your assurance of suppliers' commitment to a code of conduct that demands compliance with regulations and all-round responsible behaviour.

*Provided by the Fire Protection Association of Southern Africa

** The Electrical Contractors' Association (ECA) is a member of the Safehouse Association. The ECA has around 5000 members. Call them on 011 392 0000

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



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Suppliers you can trust

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



Using psychometric assessments in the selection of employees

WHEN I started my career as an artisan, it was a common practice for companies wanting to employ apprentices to first conduct aptitude tests on all prospective candidates. This practice seems to have fallen by the wayside, which is a pity because an aptitude test ascertains whether or not someone has an aptitude for their chosen career – and, indeed, it can prevent a misguided career choice.

So, how can an employer ensure that the best person is selected when a great many candidates respond to a job vacancy? An informed decision can be made by using a psychometric assessment, which is based on the characteristics and abilities required for the position as determined by the employer, so that the candidate who best meets the requirements is identified. The assessment provides information about various factors, such as problem solving skills, reasoning abilities and personality characteristics, allowing comparisons between candidates to be made. Additionally, a candidate's strengths and developmental areas can be identified and the assessment process can be used to predict how successful a person could be in a specific position.

Different assessments are intended to measure different factors and should be in line with the requirements for specific positions so that potential performance and job satisfaction can be determined.

Various aspects of the assessments need to be considered such as cost and time, as well as appropriateness of the assessments.

The assessment chosen depends on what needs to be measured as there are various types of assessments which measure different factors:

The candidate being assessed could expect to be tested on the following:
Intelligence and ability: Typically these tests are used to measure cognitive or intellectual ability. These can involve aspects such as pattern recognition, problem solving and reasoning abilities.

Personality: Personality is commonly believed to lead people to act in a consistent and predictable manner. This can be used to gain insight into how candidates will behave in the workplace and interact with others.

Aptitude: These assessments measure specific abilities, which are often related to skills required for a particular job. Examples of abilities assessed include mechanical insight, numerical skills, comprehension and visual-spatial reasoning.

Interests: Interest tests are used to gain insight to a person's interests and preferences. If a person has interests and preferences that have been found to be common amongst people in a specific job, then it is likely they will gain job satisfaction in that job field.

The advantages of psychometric assessments include:

- Assessments can be used to predict job performance and satisfaction.
- Interviewing candidates can only provide a limited amount of information

whereas an assessment helps to provide a deeper insight into a person.

- Strengths and weaknesses can be identified, which is useful when hiring or for developing employees.
- It provides an objective means of viewing a person.
- It can be used to determine if a candidate is the right fit for a job.

The disadvantages of psychometric assessments:

- Assessments can be costly and time consuming.
- Assessments may provoke anxiety for the candidate and the effects of that need to be taken into account.
- Cultural and language differences between candidates need to be taken into consideration in the assessment process.

Every workplace has a unique atmosphere in terms of physical and cultural characteristics so identifying an individual's interests, abilities and personality characteristics can help determine

whether or not they are a good fit for the specific job and for the particular work environment. This can aid in increasing the likelihood of good job performance and job satisfaction.

To keep in line with modern trends, the P and T Technology training centre has employed an in-house registered psychometrist who conducts psychometric assessments to assist employers in making the correct choices when employing new staff members. Please call (011) 827 4113 for more information about this service.

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http://www.crown.co.za/sparks_electrical_news.htm
 and click on the P & T Technology logo.

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<http://www.acdc.co.za/sparks.php>



Manufacturers

Bosch
Brady South Africa
Free State Transformers
HellermannTyton
H.V. Test
Legrand
SA Ladder
SA Meter Sales and Services
Stone Stamcor

Distributors

ACTOM Electrical Products
ARB Electrical Wholesalers
Bellco
Citilec
Comtest
Coast to Coast Cape
Denver Technical Products
HellermannTyton
Instrotech
Knipex and Wiha
Magnet Electrical Supplies
Major Tech
MCE Global Suppliers
Phambile Interface
Powermite Africa
R&C Instrumentation
Rutherford-Makita
Stone Stamcor
Test Instrument Africa
Verotest
Voltex
Waco

Ladders and scaffolding

Citilec
 Full range of ladders and scaffolding
Magnet Electrical Supplies
 Rigwell; Lovemore Bros
RS Components
 Limited range of ladders
SA Ladder
 Fibreglass and aluminium ladders, steel and aluminium scaffolding, castors, wheels and trolleys
Voltex
 Full range of ladders
Waco Industries
 Waco heavy duty aluminium and fibreglass ladders

Phase testing

ACTOM Electrical Products
 Full range of phase testing equipment
ARB Electrical Wholesalers
 Full range of phase testing equipment
Bellco
 Phase testers
Coast to Coast Cape
 Megger, Fluke
Comtest
 Beha Fluke phase testers
HellermannTyton
 Full range of phase testers
H.V. Test
 HV phase testers from Fameca
Magnet Electrical Supplies
 Major Tech; Catu; Surgetek; Fluke; HellermannTyton
Major Tech
 Full range of phase rotation meters and non-contact safety phase indicators
RS Components
 Full range of phase testers
Test Instruments Africa
 Full range of phase testers
Voltex
 Phase testers
Waco
 Phase testers

Earth electrode resistance

Bellco
 Earth electrode resistance testers
Coast to Coast Cape
 Megger, Fluke
Comtest
 A full range of Fluke instruments
Magnet Electrical Supplies
 Surgetek
Major Tech
 Full range of tools including clamp-on earth resistance testers with Bluetooth, analogue and digital earth resistance testers, earth resistivity and resistance testers
Voltex
 Earth electrode resistance testers

Welding instruments and accessories

Magnet Electrical Supplies
 Afrox
RS Components
 Limited range of welding instruments and accessories
Waco
 Welding instruments and accessories

Contact

ACTOM Electrical Products
 Mike Ulyett
ARB Electrical Wholesalers
 Arvi Ramdass
Bellco
 Fred Wilson
Bosch
 Sales
Brady South Africa
 Cliff Theunissen
Citilec
 Jeff Forman
Coast to Coast Cape
 David Davie
Comtest
 Val Verwer
Denver Technical Products
 Mervyn Stocks
Free State Transformers
 Stephan Naude
H.V. Test
 Sean Goodwin
HellermannTyton
 Sales
Instrotech
 Scott Hunter
IRIS - Infrared Inspection Services
 Claudette Singh
Knipex and Wiha
 Garry Lumpe
Legrand
 Luk Ivens
Magnet Electrical Supplies
 Kevin Govender
Major Tech
 Werner Grobbelaar
MCE Global Suppliers
 Sales
Phambile Interface
 Alex Lockyer
Powermite Africa
 Manfred Braun
R&C Instrumentation
 Johan de Villiers
Rutherford-Makita
 Robert Cameron-Smith
SA Meter Sales and Services
 Anton Joubert
Stone Stamcor
 Theo Mople
Test Instruments Africa
 Justin Clarkson
Verotest
 Ernst Merry
Voltex
 Hugh Ward
Waco
 Sales

Temperature testers

ARB Electrical Wholesalers
 Full range of temperature testers
Bellco
 Temperature testers
Coast to Coast Cape
 Fluke
Comtest
 HART, Amprobe, Fluke and Beha
HellermannTyton
 Full range of temperature testers
Magnet Electrical Supplies
 Fluke; HellermannTyton; Three-D; Major Tech
Major Tech
 Comprehensive range of infrared thermometers: K-type thermometers; pocket thermometers; wireless indoor and outdoor thermometers; data loggers; easy-to-carry pocket thermometers; and a versatile range of temperature kits
R&C Instrumentation
 Portable and fixed infrared thermometers; Ex- and IS-rated infrared thermometers
RS Components
 Full range of temperature testers
Voltex
 Temperature testers
Waco
 Temperature testers

Insulation instruments and accessories

ACTOM Electrical Products
 Full range of insulation instruments and accessories
Bellco
 Insulation testers
Coast to Coast Cape
 Megger, Fluke, Amprobe
Comtest
 A full range of Fluke, Midtronic, AFL, Teledyne LeCroy, Meriam, Radian, Microsemi and Siglent meters and testers
HellermannTyton
 Full range of insulation instruments and accessories
Magnet Electrical Supplies
 HellermannTyton; Major Tech; Fluke
Major Tech
 Analogue and digital insulation testers, insulation testers with true RMS industrial multimeters, HV analogue and digital insulation testers
R&C Instrumentation
 Full system power management local and via Internet
RS Components
 Full range of insulation instruments and accessories
Test Instruments Africa
 Amprobe, testers ranging from 500V to 20V
Voltex
 Insulation testers
Waco
 Insulation testers

Power tools and accessories

ACTOM Electrical Products
 Full range of power tools and accessories
Bosch
 Power tools for drilling, driving, grinding, cutting, metalworking and woodworking
Citilec
 Full range of power tools and accessories
Magnet Electrical Supplies
 Bosch, Black & Decker
Phambile Interface
 Full range of power tools and accessories
RS Components
 Full range of power tools and accessories
Rutherford-Makita
 Full range of industrial power tools and accessories including impact drills, rotary hammers, cordless screwdrivers, grinders, blowers and the 18V Lithium-Ion range (one battery fits all)
Vepac Electronics
 XP Power, TDK Lambda, Eplax, EA Series Power Supplies
Waco
 Full range of power tools and accessories

HV probes

ACTOM Electrical Products
 Full range of HV probes
ARB Electrical Wholesalers
 Full range of HV probes
Coast to Coast Cape
 Megger, Fluke
Comtest
 Fluke
Denver Technical Products
 High voltage probes, transducers and measurement for ac and dc applications
H.V. Test
 Seaward HV test sticks
HellermannTyton
 Full range of HV probes
Magnet Electrical Supplies
 HellermannTyton; Major Tech; Catu; Fluke
Test Instrument Africa (TIA Online)
 Seaward HV test sticks

Power analysers

ARB Electrical Wholesalers
 Full range of power analysers
Bellco
 Power analysers
Coast to Coast Cape
 Megger, Fluke
Comtest
 Power analysers from Fluke, RPM
Denver Technical Products
 Power analyser range of products, for handheld and permanent installation applications
H.V. Test
 Full range of reliable power meters
HellermannTyton
 Full range of power analysers
Magnet Electrical Supplies
 Major Tech; HellermannTyton; Impact Energy
Major Tech
 Compact power analysers, power quality analysers, current loggers, current and voltage loggers, leakage loggers
RS Components
 Full range of power analysers
Voltex
 Power analysers

Cable testing/cable fault location

ACTOM Electrical Products
 Full range of cable testing and cable fault location instruments
ARB Electrical Wholesalers
 Full range of cable testing and cable fault location instruments
Coast to Coast Cape
 Megger, IUP-Fault Wizard, Fluke
Comtest
 Fluke, Lantek 7CAT7 tester, Ideal Lantek range and Beha
HellermannTyton
 Full range of instruments for cable testing/cable fault location
H.V. Test
 Cable fault location, Baur SSG and Syscompact series, PHG TD PD systems, PGK series, CL series, KSG series, CL series, cable condition diagnosis, very low frequency pressure testing, cable pressure testing (ac and dc), cable sheath testing, cable identification, cable tracing, cable spiking, Schermer spiking gun
Magnet Electrical Supplies
 HellermannTyton; Major Tech; Fluke; Eberle
Major Tech
 Cable meter and identifier, LAN cable meters, networking tools, cable meter and identifiers
Phambile Interface
 Full range of cable testing and cable fault location instruments
RS Components
 Full range of cable testing and cable fault location instruments
Test Instruments Africa
 Cable Rout tracers, fault location equipment and length meters (TDR scopes)
Verotest
 Cable test vans, cable diagnostic instruments, HV test sets, ac/dc/VLF sheath test units, sheath fault locators, earth fault locators, cable and phase identification instruments, cable and object locating units

Hand tools and accessories

ACTOM Electrical Products
 Full range of hand tools and accessories
ARB Electrical Wholesalers
 Full range of hand tools and accessories
Brady South Africa
 Portable label printers (BMP21, BMP51, BMP53, BMP41, BMP71); cable and wire markers
Citilec
 Full range of hand tools and accessories
HellermannTyton
 Full range of hand tools and accessories
Knipex and Wiha
 Full range of Knipex and Wiha hand tools: pliers, wire strippers, side cutters, cable cutters, crimpers, VDE spanners and sockets, screwdrivers, Allen keys and toolkits
Legrand
 Starfix crimper, Colson cable tie tensioner
Magnet Electrical Supplies
 HellermannTyton; Major Tech; Gedore
Major Tech
 Full range of high voltage and high temperature resistant VDE insulated pliers and cutters complemented with a complete range of VDE spanners, sockets, ratchets, cable shears and hacksaws
MCE Global Suppliers
 MCE hydraulic punch and die set; MCE hydraulic crimping pliers
Phambile Interface
 Full range of hand tools and accessories
RS Components
 Full range of hand tools and accessories
Stone Stamcor
 Crimping tools – hydraulic and hand type; portable bus bar punch units and chassis punch units; hydraulic and manual cable cutters

Standard meters

ARB Electrical Wholesalers
 Full range of standard meters
Bellco
 Standard meters
Comtest
 Fluke, Amprobe
HellermannTyton
 Full range of standard meters
Magnet Electrical Supplies
 Fluke; Three-D; Major Tech; HellermannTyton
Major Tech
 Full range of standard meters
MCE Global Suppliers
 MCE ammeters, voltmeters
Phambile Interface
 Full range of standard meters
Test Instruments Africa (TIA Online)
 Full range of standard meters from Amprobe
Voltex
 Standard meters
Waco
 Standard meters

Test leads

ARB Electrical Wholesalers
 Full range of test leads
Bellco
 Test leads
Coast to Coast Cape
 Fluke, Amprobe, Megger
Comtest
 Full range of Fluke and Amprobe test leads
H.V. Test
 Baur HV test leads
HellermannTyton
 Full range of test leads
Magnet Electrical Supplies
 Fluke; Three-D; Major Tech; HellermannTyton
Major Tech
 Modular test lead sets and croc clips with plated test lead tips that stay sharp and accurate with silicone insulation for protection
Phambile Interface
 Full range of test leads
RS Components
 Full range of test leads
Test Instruments Africa
 Amprobe test leads
Voltex
 Test leads
Waco
 Test leads

Environmental testers

ACTOM Electrical Products
 Full range of humidity temperature, wind and sound environmental testers
Bellco
 Environmental testers
Coast to Coast Cape
 Fluke
Comtest
 A full range of Comtest and Fluke environmental testing instruments
Major Tech
 Thermo anemometers, lux meters, professional weather stations, humidity meters, combustible gas leak detectors, gas detectors, sound level meters, particle counters
RS Components
 Full range of environmental testers
Test Instruments Africa (TIA Online)
 Full range of environmental testers
Voltex
 Environmental testers

Clamp-on meters

ACTOM Electrical Products
Full range of clamp-on meters
ARB Electrical Wholesalers
Full range of clamp-on meters
Coast to Coast Cape
Megger, Fluke
Comtest
Full range of clamp-on meters
Denver Technical Products
Clamp on metering units for all ranges of current, for measurement of ac and dc currents
HellermannTyton
Full range of clamp-on meters
Magnet Electrical Supplies
HellermannTyton; Major Tech; Chavin Arno; Fluke; Three-D
Major Tech
Full range of clamp meters
RS Components
Full range of clamp-on meters

Polarity/ELCB testers

ACTOM Electrical Products
Full range of polarity/ELCB testers
ARB Electrical Wholesalers
Full range of polarity/ELCB testers
Bellco
Polarity/ELCB testers
Coast to Coast Cape
Megger, Fluke
Comtest
Beha, Fluke
HellermannTyton
Full range of polarity/ELCB testers
Magnet Electrical Supplies
Major Tech; Fluke; Three-D; HellermannTyton
Major Tech
Wide range of ELCB, industrial RCD/ELCB and digital RCD/ELCB testers
Voltex
Polarity/ELCB testers
Waco
Polarity/ELCB testers

Infrared thermal imaging

ARB Electrical Wholesalers
Full range of infrared thermal imagers
Bellco
Infrared thermal imagers
Coast to Coast Cape
Fluke
Comtest
Comprehensive range of thermal imagers
HellermannTyton
Full range of infrared thermal imaging devices
Instrotech
Industrial thermometers, high resolution thermal imagers, handheld thermometers
IRIS - Infrared Inspection Services
Dedicated thermal inspection service and thermal reports
Magnet Electrical Supplies
HellermannTyton; Major Tech; Fluke
Major Tech
A comprehensive range of IR thermal imagers: TG165; MT150; MT160; E40; E50; E60; E4; E5; E6; E8
R&C Instrumentation
Infrared inspection windows; infrared thermal imagers fixed and portable
Voltex
Infrared thermal imagers

Compliance testers

ACTOM Electrical Products
Full range of compliance testers and contractor's kits
ARB Electrical Wholesalers
Full range of compliance testers
Bellco
Compliance testers
Coast to Coast Cape
Megger, Fluke
Comtest
Fluke
H.V. Test
Seaward fully automatic compliance testers
Magnet Electrical Supplies
HellermannTyton; Fluke
Major Tech
Multifunction tester with memory and USB interface; multifunction testers
RS Components
Full range of compliance testers, calibration equipment and component testing
Test Instruments Africa (TIA Online)
Seaward fully automatic compliance testers
Voltex
Compliance testers
Waco
Compliance testers

Measuring instruments for site surveying

Comtest
Fluke industrial and Amprobe
Magnet Electrical Supplies
HellermannTyton; Three-D; Fluke
Major Tech
Video borescopes
Test Instruments Africa
Amprobe

Oscilloscopes

Bellco
Oscilloscopes
Coast to Coast Cape
Fluke, LeCroy, Rigol
Comtest
Nicolet, LeCroy, Gould, Fluke industrial: ScopeMeter, BK precision series
Magnet Electrical Supplies
Fluke; Major Tech
Major Tech
Full range of handheld digital storage oscilloscopes; portable digital storage oscilloscopes; True RMS multimeter and oscilloscope
RS Components
Full range of oscilloscopes
Test Instruments Africa
BK Precision
Voltex
Oscilloscopes

Voltage testers

ACTOM Electrical Products
Full range of voltage testers
ARB Electrical Wholesalers
Full range of voltage testers
Coast to Coast Cape
Fluke, Megger
Comtest
Voltage testers from Amprobe, Beha
Denver Technical Products
Full range of voltage transducers for permanent installations
HellermannTyton
Full range of voltage testers
H.V. Test
Seaward HV testers, Fameca indicators, Baur and Vanguard megometers
Magnet Electrical Supplies
Major Tech; HellermannTyton; Fluke; Three-D
Major Tech
Comprehensive range of voltage testers and two-pole voltage testers
Phambile Interface
Full range of voltage testers
Powermite
Full range of voltage testers
RS Components
Full range of voltage testers
Test Instruments Africa
Amprobe, Seaward HV testers

Sealants and lubricants

ACTOM Electrical Products
Full range of sealants and lubricants
HellermannTyton
Full range of sealants and lubricants
RS Components
Full range of sealants and lubricants
Voltex
Full range of sealants and lubricants including CRX and Q20
Waco Industries
CRC maintenance chemicals, Henkel/Pattax Silicones and sealants

Insulation testers

ACTOM Electrical Products
Full range of insulation testers
ARB Electrical Wholesalers
Full range of insulation testers
Bellco
Insulation testers
Coast to Coast Cape
Megger, Fluke, Amprobe
Comtest
Fluke, Amprobe
HellermannTyton
Full range of insulation testers
H.V. Test
Vanguard megohmmeter, Baur HV pressure testers, dielectric oil, Phoenix solid dielectrics
HellermannTyton
Full range of insulation testers
Magnet Electrical Supplies
Fluke; HellermannTyton; Three-D; Major Tech
Major Tech
Comprehensive range of analogue and digital insulation testers; insulation testers with true RMS industrial multimeters; HV digital insulation testers; and HV analogue insulation testers
Powermite
Full range of insulation testers
RS Components
Full range of insulation testers
Test Instruments Africa (TIA Online)
Amprobe
Voltex
Insulation testers
Waco
Insulation testers

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.

Strippers

ACTOM Electrical Products
Full range of strippers
Bellco
Strippers
Legrand
Starfix multi-tool stripper/crimper
Magnet Electrical Supplies
HellermannTyton
Major Tech
Comprehensive range of wire strippers; wire stripping pliers in various sizes, stripping knives, coaxial cable strippers, automatic wire strippers, dual action cable strippers
MCE Global Suppliers
MCE wire strippers; MCE crimping pliers
Phambile Interface
Full range of strippers
Stone Stamcor
Cable strippers and wire strippers
Voltex
Strippers
Waco
Strippers

Multimeters

ACTOM Electrical Products
Full range of multimeters
ARB Electrical Wholesalers
Full range of multimeters
Coast to Coast Cape
Fluke, Amprobe, Megger
Comtest
Full range, from low-cost analogue to high-resolution digital multimeters from Amprobe, Beha and Fluke
Denver Technical Products
Fluke range of multimeters
HellermannTyton
Full range of multimeters
Instralec
Full range, including Fluke, Yokogawa, Mastech, Major Tech and Toptronic
Magnet Electrical Supplies
Major Tech; HellermannTyton; Fluke; Three-D
Major Tech
Comprehensive range of true RMS industrial multimeters and oscilloscopes; industrial multimeters; industrial general purpose multimeters; compact, pocket, analogue and environmental multimeters; MT1009 True RMS multimeter and oscilloscope meter; MT1007 True RMS industrial digital multimeter
Phambile Interface
Full range of multimeters
Powermite
Full range of multimeters
RS Components
Full range of multimeters

Earth-loop impedance testers

ACTOM Electrical Products
Full range of earth-loop impedance testers
ARB Electrical Wholesalers
Full range of earth-loop impedance testers
Bellco
Earth-loop impedance testers
Coast to Coast Cape
Megger
Comtest
Full range of earth-loop impedance testers
HellermannTyton
Full range of earth-loop impedance testers
Magnet Electrical Supplies
Fluke; Major Tech; HellermannTyton; Three-D
Major Tech
Full range of earth-loop impedance and PSC/PFC testers
RS Components
Full range of earth-loop impedance testers
Test Instruments Africa (TIA Online)
Amprobe
Voltex
Earth-loop impedance testers
Waco
Earth-loop impedance testers

Draw wires and air-driven systems

Magnet Electrical Supplies
HellermannTyton; Three-D
Voltex
Draw wire
Waco
Draw wire



08 61 62 5678





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

The Electrical Contracting Industries Retirement Funds Regions A and B to be consolidated into one pension fund

THE boards of trustees of the Electrical Contracting Industries Retirement Funds have taken a decision to merge all retirement funds into a single pension fund for employees and employers in the electrical industry.

This milestone decision comes after years of analysis and comparison – and with advice from experts concluding that the provident fund is not sustainable as a stand-alone fund.

The trustees are committed to the concept of preservation of funds first and foremost, but are

equally sensitive to members' choices and took both concerns into consideration when making their decision.

As trustees, we have a duty to manage the funds in a way that serves the best interests of our members and we strongly believe we have taken the correct decision in this regard.

Readers may recall that government intended to do away with provident funds in February 2015, but this decision has been postponed for later consideration. In the electrical industry, the situa-

tion is now ripe for the transfer of members to the pension fund; and they will be given an option to either transfer their assets into the pension fund or exercise a right to withdraw the money using the cash withdrawal benefit route, should the awaited legal framework allow.

The trustees will not object to any member's decision to withdraw their funds out of the provident fund in such a case and place such funds into alternative saving schemes or for any other responsible use; but the trustees would encour-

age the preservation of funds in the existing pension fund.

I attended the investment committee meeting and these are the returns that the respective funds yielded in the previous 36 months:

The Electrical Contracting Industries Pension Fund, which has R1.388 billion in assets, yielded a spectacular return of 23.13% in terms of the report submitted to the board by the fund's investment consultants, delivering an over performance of almost 2% against the benchmark of 21.19%.

I remember the period around 1999 when these funds used to yield zero or negative performance! I have to take my hat off to the fellow trustees of these funds today for adopting a returns yielding investment strategy.

In contrast, the provident fund, which has R79-million in assets, yielded a return of 20.27% against a benchmark of 21.46%, representing an under-performance of 1.2% and underperforming the pension fund by about 1.5%. This is a three-year trend but we can trace these statistics back for a longer period and the statistics are not significantly different and the trends are effectively the same. The size of the provident fund compromises its capacity to enjoy special and segregated preference in terms of the treatment it must get as a standalone retirement fund. Present day analysis dictates that its members must be absorbed into the pension fund so they can also benefit from the economies of scale by being part of a bigger fund.

We have been reliably advised that, in this way, we will be able to drive costs down and have more money going towards retirement.

It must be understood that the pension fund and the provident fund are both intended for retirement. In other words, they are supposed to generate funds to preserve members' living costs beyond their years of active employment. Whether you are in the provident fund or pension fund, the Pensions Funds Act determines your rights equally. It is therefore important and intelligent to preserve these funds until retirement when you would no longer be in active employment.

We do understand that the provident fund members have deliberately chosen this route in order to access their money immediately upon retirement and use it as they see fit. There is nothing wrong with such a plan and it is definitely not illegal. For this reason, the trustees have decided to allow members the opportunity, should they so wish, to exit the provident fund instead of preserving their benefits in the pension fund. Such a decision will be subject only to it 'passing the legality test'.

Government did not provide an option to withdraw money available to provident fund members. We are looking at ways to make this possible within the Electrical Industry Retirement Fund. Members who wish to choose this option must communicate this, otherwise the default position of preserving the funds in the pension fund will be assumed.

There will be 'roadshows' organised by the trustees of the funds as well as 'company cluster briefings' to communicate the procedures. All members of the retirement funds are encouraged to attend these functions to ensure a smooth transition into one industry retirement fund.

Please communicate with Nomsa Magagula at the National Bargaining Council for the Electrical Industries (SA) on (011) 339-2312 to obtain information on the venues and the dates of the information sharing and feedback sessions. Experts and trustees will be available at all sessions to deal with members' questions.

I am looking forward to further engagement on this subject.



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PUBLICATIONS

Mark Palmer, Western Cape Electrical Inspection Authority (WCAEIA)

Compliance – don't be in the dark about alternative power supplies

THIS year has started with the resurgence of the dark days of 2008: Eskom load shedding because it is unable to keep up with demand. And, along with load shedding come the inevitable dangers and risks associated with alternative supplies.

The implementation of SANS 10142-1 Amendment 8 in 2008 brought about the urgent need to provide for the safe installation of alternative power supplies and, in particular, the requirements for the issuing Certificates of Compliance when alternative power supplies are installed.

Currently, there are many investigations being conducted on cases where alternative power was installed – and my immediate concern is about the competence of the people who are installing such systems.

It is an indisputable fact that many

systems are going to be installed by the users themselves or by unscrupulous operators who will resurface with the lure of 'easy money' just waiting to be made.

More concerning is the 'certification' of these connections and especially the requirements specified in SANS 10142-1 where Registered Persons are called upon to certify electrical installations when a property is sold.

Over the past seven years I have seen that these installations have been ignored by some Registered Persons who have little understanding of the Wiring Code and their legal obligations as defined in the Occupational Health and Safety Act 85 of 1993.

Putting aside the installation of these systems by unqualified electrical persons in the interim, I will briefly

look at the requirements of SANS 10142-1 insofar as Registered Persons and legitimate electrical contractors are concerned.

Test Report

The Test Report attached to Annexure 1 of the Certificate of Compliance requires a Registered Person to make a declaration stating whether or not an alternative power supply is installed at a particular electrical installation.

In determining the scope of this declaration, it is important that we consult with SANS 10142-1 to determine what is regarded as an alternative supply. This aspect is clarified in Clause 7.12 – and includes low voltage generator sets, photovoltaic (PV) installations, and so on, however this clause notes that these supplies are not limited to low voltage generating sets, photovoltaic (PV) installations, etc. Furthermore, it is made very clear in the various sub clauses that emergency supplies and UPS systems are also included.

The second important aspect linked to the declaration in Section 2 of the Test Report is the reference to Clause 7.12, which requires that all aspects detailed under Clause 7.12 have been complied with by the Registered Person. Without repeating the entire clause, I would like to point out some of the more important aspects of Clause 7.12.

Partial alternative supplies

Where residential installations are concerned in particular, it is nearly always the case that the installed alternative power supply will not produce sufficient capacity to energise the entire electrical installation by the normal supply. In this case, the following is applicable:

7.12.2.1 – Where any form of alternative supply (emergency supply, UPS, etc), is connected to an electrical installation, a notice to this effect shall be displayed at the main switch of the installation, and where such supply:

Supplies power only to certain circuits in a distribution board, a power-on indicator (visible or audible) shall be provided on each such distribution board as well as a notice indicating that the standby power main switch shall also be switched off in an emergency, Amendment 6.

Only supplies a part of the electrical installation, the notice shall also be displayed on each distribution board in that part of the installation (see 6.6.1.1(d)).

In ascertaining the safety of generator supplies in particular, which must be able to operate safely by ensuring that the operation of the protective devices are not reliant upon the connection to the earthed point of the main supply when the generator is operated as a switched alternative to the main supply, it is critical that the following be determined:

7.12.2.3 – The prospective short-circuit current and prospective earth fault current shall be assessed for each source of supply or combination of sources, which can operate independently of other sources or combinations. The short-circuit rating of protective devices within the installation and, where appropriate, connected to the main supply, shall not be exceeded for any of the intended methods of operation of the sources.

The 'switching issue'

The third fundamental safety requirement that I intend dealing with in this column is the switching issue. Here we need to consult with the following clause:

7.12.2.5 – Where an alternative supply is provided to an installation or part of an installation as a switched alternative to the main supply, the change-over switching device shall disconnect the main supply before the alternative supply is switched in. The change-over switching device shall be interlocked in such a way that the main supply and the alternative supply cannot be connected to the installation or part of the installation at the same time.

The above clauses also have reference in the declaration to be made under Section 4 (Inspection) as detailed in the test report, i.e: Where an alternative supply is installed; it complies with the requirements in respect of connections, change over switch and indicator.

Clause 6.9.1

It is also important to understand that where disconnection is required, reference must also be made to Clause 6.9.1 under the general installation and design requirements in SANS 10142-1.

6.9.1.1 – Each installation shall have

one disconnecting device to disconnect the entire installation, except in the case of multi-supplies or more than one transformer supplying the installation where each supply shall have its own disconnecting device. There shall be a notice fixed next to each such disconnecting device indicating that the installation has more than one main switch-disconnector.

7.12.5.1 Precautions that comply with the requirements of 6.9.1 for disconnection shall be taken, so that the generator cannot operate in parallel with the main supply where the supply to the electrical installation is supplied by a supplier.

Amendment 6

Note: Suitable precautions can include:

- An electrical, mechanical or electro-mechanical interlock between the operating mechanisms or control circuits of the changeover switching device; or
- A system of locks with a single transferable key; or
- A three position break-before-make changeover switch; or
- An automatic changeover switching device with suitable interlock; or
- Other means that provide equivalent security of operation.

Illegal connections installed by users

To ensure the safety of the public who have installed – or who will be installing – alternative power supplies in the coming months, many Registered Persons will be confronted with illegal connections, which may be very expensive to rectify before these Registered Persons can issue the Certificates of Compliance required for property sale agreements.

Many users will be reluctant to pay these costs and may ask Registered Persons to disconnect these supplies in order for a valid Certificate of Compliance to be issued.

Should this situation arise, it is important that Registered Persons understand the risk to the new owners should the alternative power supply be illegally reconnected. In this regard, reference should be made to the Registered Persons' obligations, which are specifically detailed in the Electrical Installation Regulations 2009:

Regulation 9 – Issuing of Certificate of Compliance

(3) If at any time prior to the issuing of a certificate of compliance any fault or defect is detected in any part of the electrical installation, the registered person shall refuse to issue such certificate until that fault or defect has been rectified: Provided that if such fault or defect in the opinion of the registered person constitutes an immediate danger to persons in a case where electricity is already supplied, he or she shall forthwith take steps to disconnect the supply to the circuit in which the fault or defect was detected and notify the chief inspector thereof.

Registered Persons must note that the information contained in this column is not intended to be exhaustive of all the requirements – and it is important that reference must be made to SANS 10142-1 Clause 7.12 for all the legal requirements.



New HR appointment

Schneider Electric has announced the appointment of Rebone Seleone as vice president: Human Resources, responsible for the organisation's southern African region. She will report directly to Schneider Electric's country president for Southern Africa, Eric Leger.

Enquiries: +27 11 254 6400

Recognition for innovative wireless lighting management system



Dr Steve Lennon (group executive for sustainability Eskom) with Brian Howarth (managing director, Magnet), Stephan Allen (technical director, Magnet) and Thava Govender (group executive for transmission and group customer services: Eskom) at the 2014 Eskom eta awards. Magnet earned the runner up award in the innovation category for the company's newly launched wireless lighting control system – the Lite-C product range – developed by Stephan Allen. This new wireless lighting management system, which is based on radio frequency (RF) technology, has been designed for the automation of lighting systems in commercial buildings, warehouse and distribution centres, as well as parkades and perimeter installations. Pre-programmed sensors are integrated into light fittings installed at height to detect movement in the area and automatically switch lights on and off as necessary. Magnet, which offers a specialist design and installation service, has made a significant contribution to the reduction of wasted energy in industrial and commercial sectors throughout South Africa. Each system can be customised to suit any building design and specific lighting requirements.

Enquiries: +27 31 274 1998

CBI launches new metal switches and sockets range

THE newly launched CBI-electric: low voltage Metal range of switches and socket outlets features a metal white plate for durability. Switch inserts feature a fluorescent strip for ease of use and a modern look.

The aesthetically pleasing Metal range was developed due to demand from consumers. It features screw-less cover plates and offers SA/European socket outlet combos. It is available

in a number of switch and socket configurations as well as blank cover plates. Rated for 240 V ac and with a current rating of 16 A the range is SABS approved and SANS 164 compliant.

CBI-electric: low voltage supplies world class miniature circuit breakers, moulded case circuit breakers, wiring accessories and specialised application circuit breakers.

Enquiries: +27 11 928 2000



Steam turbine project at Mondi Richards Bay completed

THE Zest WEG Group, through subsidiary company Zest Energy and its technology providers have successfully completed a benchmark steam turbo generator set contract at Mondi Richards Bay that showcases the Group's value addition, innovation and customer focus. The original contract was awarded in May 2012 and partially handed over in December 2013, with final hand over in March 2014. This contract has been followed by a five year Long Term Service Agreement (LTSA), where Zest Energy will be responsible for the overall maintenance of the steam turbo generator set. "The LTSA has also been linked to availability guarantees on this turbine," Coenraad Vrey, Managing Director at Zest Energy, says.

The scope of work included the design, manufacture and delivery as well as complete installation and commissioning of the steam turbo generator set and associated equipment. Original equipment manufacturer (OEM) supervision services were also provided during installation and commissioning, with 24/7 on call support for a period of four weeks following handover. The flagship project achieved a number of records: the largest ever steam turbine manufactured by technology provider TGM Turbinas. "Not only was this the first project to utilise a combination of a TGM turbine with a WEG EM alternator, it was also a first reference for both equipment manufacturers in South Africa," Vrey says.

"Throughout the execution of this project, the Zest WEG Group has proved its ability to be involved in large scale projects, not only from a standalone product supply perspective, but also from an integrated solutions point of view. This is an important achievement that will drive sustainable growth within the Group," Alastair Gerrard, General Manager at Zest Energy, says.

Zest Energy supplied the turbo generator set equipment and took the overall lead on the package, which included steam technology from TGM Turbinas of Brazil and generator technology from WEG Electric Machinery of the United States. Local subcontractor TGS (Turbine Generator Services) undertook the mechanical installation portion of the scope. Bosch Projects was appointed by Mondi as the official Engineering, Procurement and Construction Management (EPCM) contractor on the project.

Mondi already had a 38 MW extraction back pressure steam turbine and a 34.3 MW extraction condensing steam turbine and required a new 48 MW multi extraction condensing steam turbine to take up the additional high pressure steam from the plant at full load. The power generated is used on site with the excess exported to the national grid.



The Zest WEG Group Executives involved in the Mondi project: (from left) Nicky Hariparsad, Financial Director; Coenraad Vrey, Managing Director, Zest Energy; Gary Daines, Group Energy Systems Director; Louis Meiring, Chief Executive Officer; Alastair Gerrard, General Manager, Zest Energy; Luiz Fernando Ribeiro, Group Operations and Logistics Director.

The beginning of 2013 saw the design and engineering phase of the project under full swing, with close scrutiny of the finer design details to ensure that no crucial element had been overlooked. Major long lead items such as the turbine casings and forged rotor shaft had already been delivered to turbine manufacturer TGM Turbinas, while WEG Electric Machinery clocked up similar progress. The Zest Energy project team then had the formidable task of transporting the completely manufactured and assembled pieces of equipment, a process which was completed in August 2013.

Professional rigging sub-contractor Lovemore Brothers, under the supervision of TGS, was tasked with lifting and positioning the equip-

ment in areas with constrained access and onto the reinforced concrete floor of the power house, which was extended off the existing floor and designed specifically to accommodate the heavy payload and vibrational characteristics associated with the operation of such mammoth machinery. A 220 t hydraulic jacking system was ultimately used to position the equipment. Full scale installa-

tion commenced after all the equipment was positioned correctly.

Installation was completed successfully towards the end of November 2013. Vrey comments: "As the turbine control system had to integrate and operate with the complete steam management system, we had to optimise the design to ensure proper and safe operation with the rest of the equipment. It was a learning curve for us and the client in terms of developing the control system to ensure that it was a fully integrated and optimised system upon final handover."

Gerrard concludes: "To install a complex system into an existing system that is equally complex to begin with is not an easy task. With Zest Energy's



The 48 MW TGM multi-extraction condensing steam turbine rotor, which is designed to maximise efficiency and power generation capability.

experience in electrical infrastructure, substations and power generation, especially on both standby and continuous power plants, meant we could draw on all this experience and apply it to the Mondi Richards Bay project, with all the electrical integration scope carried out in house, making us unique in the marketplace."

Enquiries: +27 11 723 6000

Dedicated energy logger for energy surveys and load studies



COMTEST, Fluke's local representative, has announced a new logger specifically designed for energy conscious consumers – the Fluke 1730 three-phase electrical energy logger – rated for its simplicity in discovering sources of electrical energy waste. Its ability to profile energy usage across facilities allows the user to

identify opportunities for energy savings and provides easy-to-understand data required to take the appropriate action.

The 1730 shows when and where energy is being consumed in the facility, from the service entrance to the individual circuits. It compares multiple data points over time and builds a

comprehensive picture of energy usage with the energy analyse software package. It facilitates the rapid understanding of specific points of energy loss, which can in turn reduce energy bills.

The 1730 energy logger, in conjunction with a VT02 visual IR thermometer or the Ti125 infrared camera, can take energy surveys to the next level and quickly identify opportunities for energy savings both electrically and thermally. When using an infrared camera or a visual IR thermometer along with the 1730 energy logger, users are able to discover potential problems that could be wasting energy and then quantify them electrically with the 1730 energy logger. This combo is touted to be the perfect tool set to uncover hidden operational wastes such lighting, air conditioning and other large loads that could be switched off when not in use.

Enquiries: +27 11 608 8520

New series of current probes available



ProSys of the UK have released a new series of 3Ø micro-flex Rogowski current probes. There are three current ranges: 10 A; 100 A; and 1 000 A, with a frequency response of 20 Hz to 10 kHz (-2dB). Battery life is typically 1 000 hours. The probe aperture diameter is 50 mm although there are other models available up to 100mm. The three separate 'coax' output cables are terminated with a safety BNC connector.

Enquiries: +27 11 626 2023

Easy power quality analysing



TIA Online's new, hand-held, three-phase power quality analyser with a large easy-to-read graphical colour display enables the user to detect harmonics, phasors and waveforms anomalies in the installation simply by connecting the device. This instrument finds application in power quality assessment and troubleshooting in low and middle voltage electrical systems; the checking of power correction equipment performance; long-term analysis; predictive maintenance, and verification of electrical system capacity before adding loads. The instrument is designed for a long-term recording as well as for trouble-shooting power quality problems in three-phase and single-phase power distribution systems. The handy 'quick set' buttons make the instrument user-friendly and facilitates faster data overview for troubleshooting. Advanced PC SW package PowerView3 enables detailed analysis of recorded data, direct reading from the microSD memory card, analysis of long term records and automatic creation of professional test report.

Enquiries: +27 11 608 8541



Ac current transducer with large window

NK Technologies of San Jose, California, has released a new series of large split-core ac current transducers. The large window measures 86 x 58mm and is available in four current ranges from 800 A to 1 600 A with the industry standard 4 – 20 mA looped powered output. The ATR series incorporates a TRMS processor and thus will accurately read distorted wave forms. The AT series is a lower cost average responding unit.

Enquiries: +27 11 626-2023

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- AW200 - 200mm Adjustable Spanner
- WAK2 - Utility Knife
- ECOSET - 1000V Insulated Screwdrivers
- SLN160 - 160mm Long Nose Pliers (Super Range)
- SEP200 - 200mm Pliers (Super Range)
- SDC200 - 200mm Diagonal Cutter (Super Range)
- CC38 - 38mm Cable Cutter
- HUK1 - Universal Panel Key
- H5M - 5 Metre Tape Measure
- VG250 - 250mm Vice Grip
- HAMCWF - 450g Fibre Claw Hammer
- SW10 - 10mm Socket Wrench Screwdriver
- H300T - Tubular Hacksaw
- T50LBK - Cable Ties
- HT2BK - 2 x Insulation Tapes
- TOOLBAGI - Zip Case

NEW

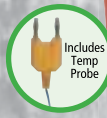
Detachable Multimeter carry pouch (Excludes a multimeter)

SAVE R606⁵⁰

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- Capacitance



CAT III 1000V IEC61010-1

True RMS

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6000 Counts

WAS R4219⁰⁰
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T70 Three Phase Sequence Indicator & Voltage Detector

- Detection AC voltage from 100V to 1000V to ground
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SAVE R139⁹⁷

WAS R509⁰⁰
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TBM072 600A AC AmpTip™ Jaws

- Jaw size 30mm
- Amptip™ low current range
- Large LCD display
- Rotary selector switch
- Continuity
- Data hold
- EF Detection

SAVE R299⁰³

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WAS R956⁸⁹
NOW R657⁸⁶

TBM086 1000A AC AmpTip™ Jaws

- Jaw size 51mm
- Amptip™ low current range
- Large LCD display
- Back light
- 3 Phase rotation for mains
- 3 Phase rotation for motors
- Temperature
- EF Detection
- Rotary selector switch
- Continuity
- Data hold
- Peak RMS 80ms in-rush current

SAVE R514⁹⁴

NEW

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WAS R1647⁸¹
NOW R1132⁸⁷

CBTL - Circuit Buddy 6 - 50 Volt Test Light

- Circuit Buddy tester is designed for the automotive industry and used to test for current on wiring, fuses etc. The product is safe and easy to use, especially when piercing wires. The use of LED's instead of globes reduces the risk of damage to electronics.

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WAS R242⁰⁰
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This kit is supplied in a sturdy case and foam cut out to secure each instrument.

INCLUDES:

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- T1125 LOOP/PSC Tester
- TBM3030 Digital Clamp Meter
- T890 Safety Phase Detector

SAVE R3965⁹⁴

WAS R12691⁰⁰
NOW R8725⁰⁶

WAS R8013⁰⁰
NOW R6210⁰⁸

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Simple to use portable earth tester

MEGGER'S DET4TC2 is a portable, lightweight device used for easy measurements of earthing. It is capable of performing two-, three- and four-point testing with variable frequency, attached rod technique (via optional clamps sold separately), stakeless testing (again via optional clamp), leakage current and ground noise voltage measurements.

The DET4TC2 is simple to use with an interface that is easy to understand. To switch between tests, the user simply turns the rotary dial to choose which test

type he wants. He can then choose the frequency of the test using the Hz to switch between 94, 105, 111 and 128 Hz modes and can then change the overall voltage of the test procedure between 25/50 V. A button for activating a backlight on the LCD screen allows measurements to be seen in poor lighting conditions.

By use of ICLAMP (Megger accessory which is sold separately) the Megger DET4TC2 is able to use ART, which allows electrode testing without connection and leakage current measurements. The

VCLAMP accessory performs true stakeless measurements, ideal for areas where it is impossible to use driving stakes.

The overall resistance range of this device is between 0.01 Ω to 200 kΩ, the ground noise voltage range is between 1 V to 100 V and ground current measurements are between 1 mA to 20 A. To aid with maintaining the accuracy of test results the DET4TC2 also includes noise evaluation and rejection, and the device will automatically reject noise voltages of 40 V peak to peak to minimise the overall effect electrical noise can have on test results. This device is rated to 100V CAT IV and is in compliance with IEC 61557-5.

Megger is represented locally by Surgetek.

All content courtesy of Megger.

Enquiries: +27 11 792 1303

Rotary hammer with advanced vibration control



THE Makita HR4013 rotary hammer is powered by a 1 100 W motor and produces super speed and efficiency during drilling, chiselling and demolition operations in reinforced concrete.

The new anti-vibration technology built into this specific model produces unrivalled lower levels of vibration. This is achieved by using active vibration absorbers, and damper springs absorb the reaction force caused by the drill bit at the moment of impact. The level of vibration is further reduced by completely separating the machine holding section from the motor/transmission section. Therefore, when the machine moves the handle stays still, similar to how a shock absorber works on a motor vehicle.

Another great new addition on the HR4013 is the soft no-load function that reduces the vibration of the tool body when idling and accordingly decreases the amount of vibration to the operator's hands. It also minimises the deflection of the bit tip when the user begins to chip.

The HR4013 has increased drilling efficiency that is 20% higher (using a 32 mm diameter bit) and a 45% higher chipping efficiency (with a bull point) when compared to its predecessor model.

An SDS-Max drive system, with a drilling capacity of 40 mm will drill just about anything.

The one-touch sliding chuck allows for quick and easy bit changes. Due to rotary hammers being used in rugged applications, Makita has focused on the safety aspects of both the operator and the tool. A torque limiter has been built in to ensure stable torque control that stops the rotation of the drill bit in case it hits against any reinforcing bars, thus preventing possible muscular injuries to the operator or damage to the tool.

This two-mode rotary hammer – with its easy to operate operation mode change lever that is located on the top of the motor housing – has four settings: the lock-on position for continuous chiselling applications; a trigger position for intermittent chiselling applications; a bit angle setting and the rotation with hammering.

A soft rubberised D-grip handle and side handle provide added comfort and greater control, while minimising hand fatigue and pain. It also reduces the level of vibration absorbed by the operator.

The HR4013 has a red LED service light that indicates when the carbon brushes have to be replaced.

Specifications include 1 450 to 2 900 b/min and a no-load speed of 250 to 500 r/min.

The HR4013 weighs 6.8 kg and comes with a five metre power supply cord. A depth gauge and a side handle are included as standard items.

Enquiries: +27 11 878 2600



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Stay productive with Makita's extensive range of 18V Lithium-Ion Cordless Power Tools.

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The DML801 has a versatile selection of rotatable and foldable light head positions for wide and bright illumination with a 2-stage push button switch.

9 1/22² hours

Lengthy continuous illumination

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DHR263ZK - 36V (18V + 18V) Cordless Combination Hammer

Outstanding Performance and Compact Design.



18v + 18v → 36v

- Powered by two 18V Li-ion batteries in series.
- LED job light.
- 3 mode operation - rotation only, hammering with rotation and hammering only.
- Compatible with 1.5Ah, 3.0Ah and 4.0Ah batteries.

Capacity: - Concrete:	26mm
- Steel:	13mm
- Wood:	32mm
Blows per min (b/min):	0 - 4,800
No load speed (r/min):	0 - 1,200

XPT

Enhanced protection from dust & dripping water, when using it in outdoor applications or harsh environments.

Batteries and charger sold separately

18V Battery Charge Times using the Makita DC18RC Fast Charger:
1.3Ah – 15 minutes, 3.0Ah – 22 minutes, 4.0Ah – 36 minutes





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www.makita.co.za

Professional jigsaws for professional jobs



THE South African division of Bosch Power Tools recently launched the compact, light-weight and low-vibration GST 160 CE/BCE Professional jigsaws, which offer the user high precision, powerful tools.

Bosch Industrial Power Tools SA senior brand manager Craig Berridge says "The GST 160 CE/BCE Professional jigsaws from Bosch feature a 'precision control' saw blade guide, which ensures an exact cut. There is an optimised double roller guide that minimises bending of the saw blade and prevents the blade from straying from the required path."

There are two versions of the GST 160 Professional available from Bosch: the GST 160 CE Professional jigsaw has a barrel grip and weighs 2,2 kg. The GST 160 BCE Professional features a bow-handle and weighs 2,3 kg. "Both ver-

sions of the GST 160 Professional feature a powerful 800W motor, a robust base plate made from die-cast magnesium and a plastic sole, which prevents damage to delicate surfaces. The GST 160 CE/BCE 160 Professional also features an LED light to improve visibility of the working area, ensuring a clean cut." The base plate of the GST 160 CE/BCE Professional can be easily adjusted to an angle of 90° to perform mitre cuts. There is an additional cam bar that ensures strong form-fitted and force-fitted angle positioning.

The saw blades can be changed easily without the need for additional tools. Additional features include: a dust blowing function, which ensures that the user always has a clear view of the cutting area; an electronic speed pre-selection option allows the sawing speed to be adjusted

to suit a specific application; and a restart protection function prevents uncontrolled start-up after the power has been cut.

Berridge says the Bosch GST 160 CE/BCE Professional jigsaws can reliably cut thick materials. The GST

160 CE/BCE Professional jigsaws come standard with an L-Boxx for storage, which includes three saw blades, an anti-splinter guard, and a dust extraction set.

Enquiries: +27 11 651 9600

Championing technologies that drive efficiency



Schneider Electric's Jean-Pascal Tricoire, chairman and CEO (middle) with Mohamed Saad, senior vice president for Africa and the Caribbean (left) and Eric Leger, country president for southern Africa (right) at the '360-degree Schneider Electric experience' at its new 12 000 m² site in Midrand. Tricoire says that energy management solutions and efficiency technologies are a "means to end the energy crises" experienced worldwide. "The convergence of IT and energy technologies, the Internet of things applied to energy, allows increasing control and anticipation in the use of energy and resources. Schneider Electric's technology and expertise is therefore focused on safety, reliability, efficiency and the grid, encompassing both industrial and green automation innovation," he adds. Representatives from the French Development Agency, Angolan Trade Commission, the French Embassies in Botswana and South Africa, and members of the local media, were invited to join Tricoire and Saad and see the company's manufacturing operation, which is also the new home of its mining team, its Sustainability Development business unit and Low Voltage Electrical Distribution division, as well as the Schneider Electric Academy and the company's data centre consolidation initiatives. Employees from the Capital Hill, Bartlett and Gemiston sites, as well as certain personnel from its nearby headquarters, have relocated to this site.

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Three-in-one pliers for the discerning electrician

Wiha Premium Tools' TriCut pliers are ergonomically designed and comfortable to use, which means that they are safer to use – the perfect pliers for electricians – and this one tool replaces three pliers but costs half the price, says Garry Lumpe. "The TriCut has the functions of diagonal cutting pliers and easily cuts cables – and the specially engineered head enables dismantling and stripping along the cable lengthwise.

The TriCut effortlessly cuts through cable sleeves so that wires can be stripped – even in hard-to-reach locations," he says adding that the German quality means the pliers are forged from high quality C70 steel and additionally induction hardened to about 64 HRC – so the cutting edges are top-notch and stay sharp for a very long time.

Enquiries: (011) 396-4065



LED work lights for mining, industry and constructions sites

Major Tech's range of high power LED work lights is designed to replace traditional power guzzling Halogen floodlights and are ideally suited to mining, construction, plant and industrial sites. "The stainless steel and toughened glass cover is water-proof and weather-proof while the light source consists of high-power LEDs, which are connected to the aluminium shell, ensuring low heat emissions and 30 000 hour lifespan," says Major Tech's Werner Grobbelaar. He says the LED work lights offer "cool and pure light" for improved visibility and

they are mounted on a sturdy adjustable heavy-duty telescopic stand. "This enables the lamp height to be extended to 1.75m. These lights are supplied with a 3.0m cable and a South African plug," adds Grobbelaar. The range consists of the WLF210 (2x10W) producing 1 800Lm, which projects light from 4 to 20m²; the WLF120 (1x20W) producing 1 800Lm and projecting light from 15 to 30m²; and the WLF220 (2x20W) producing 4 500Lm and projecting light from 15m to 30m².

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Light when you need it



The Legrand PIR ceiling mounted lighting management sensor, with 180° infrared detection, is ideal for passageways



Legrand's lighting and motion management systems reduce the amount of time lights are left on unnecessarily, saving hours of wasted electricity each day.

mend a number of solutions to maximise energy savings and to ensure absolute comfort for occupants of the building."

Legrand's lighting management sensors are used to monitor the detection area for occupancy and to control lighting and HVAC circuits. Lighting is automatically switched on when a person is sensed. Where sensors are equipped with a built-in light level sensor, the lighting will be kept off when sufficient natural light is available. When the area is vacated, the lighting automatically switches off after a pre-set time delay.

Motion sensors, with an automatic switch on/off facility, are recommended for areas with little or no natural light, for example in passageways, bathrooms and equipment rooms.

Passive infrared (PIR) technology of motion sensors detects occupancy up to 8m, by identifying the difference between heat emitted from the human body in motion and the background space.

Lighting management sensors - designed for shops, offices, healthcare buildings and warehouses - have a manual or automatic switch on/off, according to whether there is anyone present and the natural light level. These sensors have built-in adjustable lux sensors that keep the lighting switched off if there sufficient natural light.

Detection of lighting management sensors is based on PIR technology and dual technology (DT) which ensures maximum sensitivity and coverage in applications for optimum reliability and energy saving. Legrand sensors work in occupancy mode, where are lights are automatically switched on or off according to occupancy, or in vacancy mode for additional energy saving, where lights are

manually switched on and automatically switched off when the person leaves the area.

For enhanced flexibility, switch sensors can be combined with room controllers to manage a number of lighting and ventilation circuits. For example, in areas where daylight is unevenly distributed, a sensor can be combined with a row of luminaires to measure motion and light levels. The dimming controller regulates each row of luminaires and supplements the external light to obtain the required pre-set light level.

Once the sensor and controls have been selected for each installation, Legrand offers a choice of local BUS/SCS control or the global BUS/KNX solution for lighting management.

BUS/SCS (simplified cabling system) wiring enables local and remote presence and light level detection and management. Every installation, which also includes time and scenario management functions, is designed, monitored and supervised on a PC, using Legrand's advanced software.

As an addition to this local control system, the wireless Radio/ZigBee system can be used to install new radio control points, without damaging walls. This system is ideal for refurbishment installations or glazed surfaces.

In addition to BUS/SCS, BUS/KNX wiring enables supervision and integration of other building applications, including emergency lighting, HVAC and fire alarms. This building control system enhances energy and operating performance, also ensuring ease of maintenance.

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LEGRAND'S lighting and motion management systems, which are designed to make industrial, commercial and domestic buildings more energy efficient, encompass switch sensors that reduce the amount of time lighting is left on unnecessarily.

"Lighting, together with heating and air-conditioning, accounts for the greatest energy consumption and electricity costs of a building," says Luk Ivens, general manager, Legrand Southern Africa. "With the installation of an automatic lighting and motion management system, which ensures there is exactly the right amount of light when and where it is needed, energy savings of up to 60% can be achieved. Reduced lighting usage not only lowers operating costs, but also helps decrease Green House Gas (GHG) emissions. Additional savings include reduced lamp replacement and maintenance requirements and lower power demand during peak hours. Because various areas in a building require different lighting control strategies, we recom-

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willie@superlume.co.za



Stutterheim's lighting installation gets international recognition

AN energy saving lighting installation in the South African town of Stutterheim was awarded a special mention at the Auroralia Awards – organised jointly by LUCI and Schröder – held in the French city of Lyon on 6 December during the city's annual light festival.

Over 100 lighting professionals – from city authorities and architects to town planners – gathered at this prestigious competition that awards lighting projects, which have significantly reduced energy consumption and, at the same time, have had a positive social impact on the well-being of the local population.

Now in its sixth year, the 2014 Auroralia Awards received 17 entries from around the world – confirming the growing commitment of local authorities to minimise the ecological footprint of urban lighting.

The distinguished panel of judges singled out Stutterheim for its lighting project that set out to replace the rural town's lighting. The project fulfilled multiple objectives: it enhanced the landscape, increased the safety of residents commuting to and from the town centre at night; reduced energy costs without compromising lighting levels; and took into account respect for dark sky initiatives.

The lighting material also had to reflect the local forestry industry. With LED luminaires mounted on

poles made from locally-sourced wood, this successful relighting initiative has improved the well-being of the local community, some of whom have to commute by foot – often after nightfall. It has also reduced energy costs by an impressive 79% – and CO₂ emissions have also decreased significantly.

By awarding a special mention to this town, the jury wanted to highlight their initiative as an excellent example to follow.

Winners

The top three awards went to European lighting initiatives in Eindhoven (Netherlands), Malaga (Spain) and Lamego (Portugal) while Stutterheim received a Special Mention Commendation.

Enquiries: +27 11 238 0000



Councillor Phila Lilwani (mayoral committee member for technical services) and Hans Moerdyk (Stutterheim city electrical engineer) receive the Special Mention Award on behalf of Amahlathi Municipality at the Auroralia 2014 Awards in L



The lighting installation in Stutterheim that put the South African town on the international lighting map.

Lighting specialists on the move



Rui Silva, an experienced and well known manager at BEKA Schröder, has been appointed as the technical sales support manager, effective as of January 2015. Silva has been with BEKA Schröder for seven years, and has a wealth of electrical, technical and lighting experience in the industry.



Sibusiso Skosana recently joined BEKA Schröder as marketing manager. He will lead the development and execution of the company's long-term marketing strategy in South Africa and the southern African regions. Skosana has spent a solid 15 years in the engineering field.

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Bright Sparks

A tower of coins

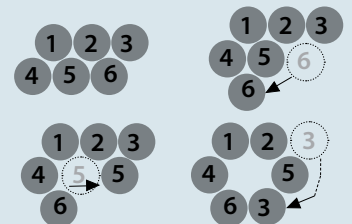
Mary had marked three circles on a piece of paper and placed in one of them a R5 coin, a R2 coin, a R1 coin and 10c piece, in that order from top to bottom. "You see," she said, "that each coin rests on a larger coin. The puzzle is to move all the coins from where they are now to the end circle, by moving one coin at a time and never placing a coin on a smaller coin.



"That is easy", said Peter. "What is the trick?"
"There isn't one," Mary replied. "All you have to do is to take as few moves as possible." How can this be done?

February solution

A ring of coins



APRIL FEATURES

CABLES AND CABLE ACCESSORIES

Regular topics such as cables, cable accessories, cable management systems, cable sizing, skirting, trunking, conduit, cable trays, cable marking and labelling, cable jointing techniques, wire sizing, fault finding, hazardous areas, flameproof, cable terminations, glands, cable installations and trenching will be included.

MOTOR CONTROL CENTRES AND MOTOR PROTECTION

Panel building, gauges, displays, maintenance, protection, protection relays, starters, drives, motor types, sizing, starting, stopping, refurbishment, controlling, enclosures, switches, push-buttons, LEDs, digital displays, relays, timers, temperature controls, process, building management, insulation testing, vibration monitoring, maintenance, flameproof equipment.

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