

# WHAT'S WATT

June  
2022



Featuring: Localisation and Industrialisation.

ACTOM

# ACTOM performed well in year to end-March 2022, despite ‘horrendous’ business environment

**I’m very pleased to note that in the financial year to end-March 2022 our business met budgeted levels both on profit and cash, despite a horrendous business environment, both globally and locally.**

The war in Ukraine has created chaos in global markets through supply and commodity stocks, which have had a major impact on all countries. We’ve seen oil prices rise and major inflationary pressures across many items, leading in turn to increases in interest rates which have resulted in major weakening of emerging market currencies. Massive increases in logistics costs and delays, as well as shortages in raw materials required for production have also occurred as a result of the crisis.

Locally the major floods in KZN had a devastating impact on many lives as well as the economy. There were several of our operations affected through damage of property as well as an adverse impact on operations, which suffered disruptions to both water and electricity supply. Many of our staff were also affected, with damage to assets and disruption to services.

I’d like to commend all of our employees in Durban who got involved hands-on in the clean-up of our buildings. We are grateful to everyone for being so involved and supportive through this.

We have already passed the fifth wave of COVID-19 as I write, with infections declining. It is however important that we remain vigilant and maintain precautionary measures to prevent the spread of the disease.

Returning now to ACTOM’s suc-



cess in “beating the odds”, albeit temporarily, during the 2021/22 financial year, our manufacturing businesses continued to experience a generally depressed capital cycle during that period. Offsetting this trend, good support came from the mining sector due to improved commodity pricing, while our aftermarket repairs and services businesses performed exceptionally well – a demonstration, incidentally, of how the increasing diversity of the group’s operations over time have helped to protect us to some extent from the negative impact of adverse conditions.

Two major contract awards won by group divisions during the year are worth noting:

- John Thompson’s Utility Boilers & Environmental (B&E) business unit secured a multi-billion rand boilerserve contract at Eskom power stations. This represents a major expansion of the unit’s boilerserve business with the utility.
- LH Marthinusen scored a major

breakthrough by winning a long-term draught fan maintenance contract.

Our health and safety performance is currently at a LTIFR of 0.69. I’d like to commend everybody for maintaining a safe working environment.

In an attempt to make a difference in our own way as a leading player in our field, ACTOM has embarked on various initiatives to provide more training to people to help them earn an income. In addition to taking steps to expand the capabilities and scope of our Technical Training Centre for apprentices, the group kicked off a programme this year in which we recruited 20 young women from informal settlements around our Knights site to train them in such things as the basics of electrical repair, plumbing, solar panel installation and painting. This programme was developed with the specific objective of giving people basic skills to help them put food on the table in a matter of months.

Our country currently faces a major electricity supply crisis due to years of maintenance neglect. There are major backlogs in electricity generation, transmission and distribution which will ultimately culminate in major opportunities for the ACTOM group. There are also various initiatives towards renewable energy generation, as evidenced from the Risk Mitigation Round as well as Rounds 5 & 6, which are currently in the tender process. As these projects reach financial close we expect a surge in demand for our manufacturing operations and are optimistic as we head towards year end.

**Mervyn Naidoo**

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**Cover:** All thirteen of ACTOM’s divisions are actively involved in localising their products and employs local people to assist in manufacturing.



# Localisation and Industrialisation – the domino effect

The South African Government has long highlighted localisation and industrialisation as critical policy aims during the economy's recovery from the COVID-19 crisis. It is such a hot topic that organised business in Nedlac has recently been requested to substitute 20% of non-petroleum goods imports for domestically produced goods as soon as possible.

So, why is localisation touted as the siren song of the South African economy?

In simple terms, since the Gross Domestic Product (GDP) is made up of the sum of consumption, investment, and exports less the cost of imports, anything that reduces imports raises GDP if nothing else changes. In this way, localisation promotes growth, industrialisation, and employment.

It is no secret that South Africa's current economic trajectory is unsustainable: economic growth has stagnated, unemployment is rising, and inequality remains high. The government should urgently implement a series of reforms that can boost South Africa's growth in the short term while also creating the conditions for higher long-term sustainable growth. These reforms should promote economic transformation, support labour-intensive growth, and create a globally competitive economy.

In practical terms, localisation implies local procurement by the government and the private sector alike. The overarching vision is not to localise everything but to localise where possible and sustainable.

**Mervyn Naidoo**, ACTOM CEO, feels passionate about localisation and designation, that all thirteen of ACTOM's divisions are actively involved in localising their products. "What is important is that you need government spend to localise. Localisation has an impact on the whole supply chain. When you localise manufacturing, all the sub-components of manufacturing fall into place and benefit communities," Mervyn said.

In many respects, South Africa appears to be at a tipping point. Record levels of unemployment, rising poverty levels, increasing political uncertainty and the large-scale diversion of resources away from inclusive growth to the beneficiaries of state capture have created an environment in which investors are understandably cautious and seek investment opportunities



*High Voltage Equipment is striving to manufacture better and more efficiently, helping to bring it into the 4th Industrial Revolution arena.*

abroad. Suppose we continue our current low road, the prospect of an IMF intervention beckons, with the associated loss of sovereignty determining our economic future. Against this backdrop, we risk a toxic cocktail of continued further de-industrialisation and job losses. Job losses lead to an increased burden on the state in terms of basic income grants. It is important to note that approximately eighteen million people depend on basic income grants, which is just not sustainable.

"We have to take an inward look – look at ourselves and see how we can revitalise manufacturing in our country and employ local people to assist in manufacturing," said Mervyn. "International companies working on projects in South Africa bring their own people to work on projects locally, resulting in job losses for the indigenous population. This has the potential to trigger xenophobic behaviour, as seen previously. Anger levels are rising nationally, given the magnitude of the unemployment crisis," he added.

In recent years, the municipal entity market segment requirements for localisation compliance have taken shape under the Preferential Procurement Regulations of 2017. There are two central tenets in construction-related works typical to our environment: skills development and small businesses alike.

South Africa has the funding channels to support large industrial projects, such as banks and the development finance sector. Industrial financing support such as government schemes, development finance and tax incentives,

and the country's 13 special economic zones (SEZ) can reduce project risks and raise returns on investment.

In a society with extraordinary levels of unemployment and poverty, all efforts will need to be made to find commercially sustainable ways to create new jobs in the private sector, to complement what can be done through public employment opportunities. New job growth will be stimulated by the demand for the production of goods and services, which can come from a combination of expanded domestic demand and increased exports. To create jobs on a scale, we must pursue these drivers of new private-sector job growth.

**John McClure**, General Manager of ACTOM Power Systems, added, "at the outset of a new contract, we get in touch with the local ward councillor to collaborate and strategise on the embedded localisation potential within the contract's scope of supply. With the councillor's guidance, a Community Liaison Officer (CLO) serves as a conduit within the ward. A labour histogram is drafted to forecast the project's human resources requirements, with the CLO performing an agency function to attain our fluctuating resource requirements. Additionally, we compile a list of subcontract opportunities circulated amongst local business forums to assist in identifying fledgling ventures for participation."

Conscripts are appointed under the Expanded Public Works Programme (EPWP) initiative, primarily focused on providing poverty relief and skills

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development through temporary work for the unemployed.

On-the-job training is given on construction skills, including bricklaying, plastering, painting, concrete formwork, cable terminating and electrical wiring. At any given time, there is usually a team of eight to fifteen EPWP personnel working alongside a site crew at each substation, with wages set at the prescribed rate. Thus, while their engagement is only transitory, the skills transferred can improve their future employability prospects and possibly even inspire some to go into business themselves.

All such work is performed under the supervision and assistance of ACTOM'S in-house site management structure as we ultimately assume accountability for overall contract delivery irrespective of whom performed each task. Often special arrangements are required to facilitate such works in terms of procurement assistance or preferential payment terms.

With ACTOM's John Thompson division, most construction, maintenance, repair and services projects for large SOE, government, quasi-government, and private organisations require that they complete one or more of the following with their project scope:

- Skills development of locals
- Enterprise Development of local small black-owned businesses
- Supplier Development of local small black-owned businesses
- Corporate Social Investment in local communities
- Subcontracting to local black-owned Emerging Micro Enterprises (EME) and Qualifying Small Enterprises (QSE) businesses



*ACTOM VISA (Vacuum Interrupters South Africa) remains the only manufacturer of vacuum interrupters in the southern hemisphere and has recently upgraded its production facilities to manufacture significant volumes of highly customised vacuum interrupters.*



*Isikhebe Sizinze Trading is one of the SMME's Genlux Lighting uses under their Enterprise development and Supplier development program. In the back is owner Wentzyl Chetty who heads up the manufacturing team.*

"The localisation obligations are intended to benefit local communities which generally have high unemployment rates, widespread poverty, low education qualifications and which communities are rural or peri-urban in nature", said **Shardanand Seeth**, Business Development Executive of the John Thompson Division.

"All SOE and large corporate clients impose these requirements on us as contractual obligations – and our performance is measured against these commitments. Non-compliance generally carries a financial penalty for the business", he added.

Genlux Lighting, an ACTOM Business Unit, uses a programme whereby sub-assembly and supply are done through two local SMME companies under Enterprise development and Supplier development. "This is hugely beneficial to both Genlux Lighting and the SMME companies", said **Sello Tsoai**, General Manager, Genlux.

The SMME companies are set up with all required equipment, tool-

ing, and systems relevant to Genlux Lighting's production requirements according to their specification.

As a manufacturer of traditional electric elements and thermostats for domestic use, Satchwell came under severe price pressure in the early 2000s due to imports from the Far East. Many of Satchwell's Original Equipment Manufacturers (OEM) customers could not sustain their businesses due to the imported completed product (small household appliances). Certain large household appliance manufacturers (kitchen stoves and domestic hot water cylinder manufacturers) were bought over by overseas enterprises with their own supply chains.

Localisation is a word that appears in each of the economic recovery strategies published by the Presidency, Nedlac, numerous political parties and Business SA. "Localisation will benefit Satchwell extensively by creating employment opportunities for its support industries, supplying a vast array of raw material and componentry to the organisation. For Satchwell, as for many other businesses, it can only be a good thing", said **Amo Muller**, General Manager, Satchwell.

According to **Casbah Zwane**, CEO of ACTOM High Voltage Equipment, "I want to see us manufacture better and efficiently and have advanced our products, bringing it into the 4th Industrial Revolution arena. Industry 4.0 enables continuous resource productivity and efficiency gains to be delivered across the entire value network."

The Fourth Industrial Revolution is more than just technology-driven change; it is an opportunity to help everyone, including leaders, policymakers and people from all income groups and nations, harness converging tech-



nologies to create an inclusive, human-centred future. "If companies can just buy local and refrain from importing, South Africa might have a chance," he concluded.

Government must adopt the appropriate structures and controls. The private business sector must locally source, manufacture, produce, and encourage skills development, whilst

the public must buy locally produced products and services. It is crucial that businesses actively enhance and optimise production processes to ensure that manufactured products are as cost competitive as can be, relative to imports. It is also important to understand that developed economies have actively leveraged on their local infrastructure spend to enhance

GDP growth, which is something South Africa needs to emulate. South Africa needs to urgently increase the number of economically active people in our society, which will bolster GDP growth. Growing the manufacturing sector and industrialisation has the ability to deliver this. The responsibility to drive the South African economy lies squarely on our shoulders.

## ACTOM launches Women's Empowerment Programme

**ACTOM has launched a Women's Empowerment Programme aimed at providing work skills training to young women to enable them to set up and operate small businesses of their own.**

Late last year 20 women were selected for training in a variety of work skills after interviews were conducted among unemployed young women from local townships and informal settlements in the vicinity of ACTOM's head office and factories site in Knights, Germiston.

"The skills training got under way in January this year covering work that includes trade skills such as carpentry, plumbing, painting, electrical skills and solar installation, as well as beauty and

nails, seamstress and completion of an N4 in HR by one of the incumbents," said **Sy Gourrah**, Senior General Manager: Smart Technologies, who is one of three woman trustees appointed by senior management to manage the group's Women's Empowerment trust, together with the assistance of **Kobus Swanepoel**, the Technical Training Manager.

"The range of skills for which training is being provided is based on the types of work the women themselves are interested in learning to do," Sy explained, adding that most of the courses are SETA-accredited courses.

As part of the programme the trainees are also receiving "new venture" training to enable them to start and

operate their own businesses within their communities in applying their newly-acquired work skills.

"This portion of the programme, which was launched in April this year, overlaps the work skills training portion. It is designed to ensure that the women can apply their skills, earn a living for themselves and their families and at the same time contribute to the upliftment of their communities," commented Alleyzandt Verhufen, John Thompson's HR Executive, who is also a trustee for the Women's Empowerment Programme.

In the "new venture" course the trainees receive basic entrepreneurial training. "This learnership equips them

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Carpentry instructor Paulos Mthimunya of Africa International Training Facilities (AITF) in Ekurhuleni is seen above showing some carpentry techniques to Women's Empowerment Programme trainees (from left) Pumza Mncwango, Thandiswa Mtsila, Mpumelelo Phulwana and Mpho Motsoeneng.

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with all the basic skills of running a small business, including how to prepare a business plan, how to manage your finances and how to market and sell yourself and the services you pro-

vide," Alleyzandt pointed out.

The third trustee, Moreka Gomez, LH Marthinusen's Financial Manager, said: "This is a very exciting pilot programme ACTOM has engaged in and

we are hoping for a very successful outcome for the selected trainees, so that the programme can continue to benefit young unemployed females for many years to come."

## Key new appointment aims at enabling the group to offer 'integrated solutions' to major customers

**ACTOM has appointed a new Group Business Development Executive charged with the responsibility of sourcing new business opportunities for the group as a whole.**

She is **Mamiki Matlawa**, who was appointed to the position with effect from March 1 this year.

Since qualifying with a B.Tech degree in engineering from the University of Johannesburg in 2003, Mamiki has worked in various industries in technical and supervisory positions, as well as at Eskom as part of the production teams for three power stations and for the Industrial Development Corporation as a project manager on a number of IDC-funded projects.

In announcing this important corporate appointment, **Mervyn Naidoo**, ACTOM's Group CEO, emphasised that the position is uniquely demanding and multifaceted as its aim is to encompass all aspects of what the group does, the great variety of products and services it provides, while at the same time requiring the incumbent to have a clear understanding of all the technologies involved and the numerous applications they may be applied to.

"In addition, the holder of this position needs to become familiar with all the existing and potential markets for the group's offerings and to keep in touch with these markets to ensure that all opportunities for ACTOM's participation in new projects are taken up in good time as they arise," he said.

He underlined the fact that the group's divisions and business units have always – and continue to – operate on a decentralised basis. "This approach has been adhered to all along because of its distinct advantage of ensuring that the necessary and appropriate focus and technical expertise are applied to the requirements of the specific markets and customers concerned in each case. It however results in a tendency for divisions and business units to focus solely on their own range of offerings suited to a customer's project to the exclusion of the



Mamiki Matlawa

possibility that other divisions within the group may also have something worthwhile to contribute to the project in hand," he explained.

"This is where Mamiki comes into the picture, her job being to ensure that all opportunities for group participation in any given project are capitalised on to the full, so that no chance for a division to participate in a project is missed. In such instances the multiple offerings by the group are quoted for and provided as a co-ordinated package, with the customer also standing to benefit through cost savings from the integrated group offering.

"We are finding a greater need in the market for turnkey offerings on infrastructure projects which go across multiple divisions," Mervyn stated.

This co-ordinated approach has been successfully applied in recent years, but has tended to be done on a piece-meal basis. "What we are now aiming to achieve with Mamiki's help is to have it applied across the board throughout the group and on every major project without exception," he said.

But while this goal is the main objective that the group has in mind in appointing Mamiki as Group Business Development Executive, it also wants to see it resulting in substantial development of more business for the group throughout Africa.

"Though some of our divisions have been successful in developing good and fruitful relationships with customers in various part of Africa, a lot of potential exists to develop a great deal more business on the continent, particularly on the basis of the 'integrated solutions' model I've outlined," Mervyn commented.

"Mamiki with her wide range of experience in various fields of business, especially in infrastructural projects, including energy-related projects of various kinds, is well-positioned to make important inroads in this respect. We hope this will lead to ACTOM gaining entry into some new markets, resulting eventually in worthwhile new business opportunities, as well as extending our footprint on the continent," he concluded.



## Technical Training Centre spreads its wings to provide ongoing 'external' apprenticeship training

Coinciding with Kobus Swanepoel's appointment as Manager of ACTOM's Technical Training Centre (ATC) at Knights on July 1, 2021, a decision was taken by Group HR Executive Sylvester Makamu to adopt a new training strategy.

Previously ATC's primary function was to recruit and provide training for the ACTOM group for applicants who have an N2, which is the minimum requirement, as apprentice artisans in the range of electrical and mechanical trades applicable within the group.

ATC was re-accredited on November 15, 2021 for the already existing trades: mechanical fitter, tool, jig & die maker, electrician and fitter & turner. They have also added a metal machinist (turner) and millwright to their list. They also offer ARPL (Artisans' Recognition of Prior Learners) assessment and gap training.

"This has necessitated having to obtain extra accreditations for additional trades to those we already cater for, as well as get on board with existing training programmes and training colleges that provide theoretical technical training that we are well-positioned to work closely with in providing the necessary hands-on training which complements and completes what they teach," Kobus said.

"The ARPL applies to people who

have had more than three years' work experience but haven't had the opportunity to do an apprenticeship. We assess them and do the gap training so they can become qualified," he explained.

Furthermore, ATC has arranged with public technical & vocational education & training (TVET) colleges to provide work-based training for their learners.

"The learners receive their certificates from the colleges when qualifying. They're then required a further two years in industry to get their diploma," Kobus said.

The fields of study these students do cover engineering and business studies. The Engineering Studies comprise:

- Mechanical Engineering N6
- Electrical Engineering N6
- Electronic Engineering N6
- Fitting and Turning
- Plate and Steel (Boiler makers)
- Motor Mechanics
- Electricians
- Transport and Logistics
- Mechatronics

The subjects under Business Studies are:

- HR management
- Office Administration
- Management Assistant

- Marketing Management
- Hospitality studies

To date ATC has provided the following services for external companies:

- Six months institutionalised training in various mechanical trades, electrical and millwright.
- ARPL assessment and gap training for learners from various external companies.
- Training and hosting 36 learners in different trades from one external company.
- Six weeks' trade test preparation in electrical and various mechanical trades.

For internal ACTOM divisions ATC has recruited 24 learners in various trades, one of which is electrical for six months institutionalised training, followed by three years of work-based training.

"Towards the end of this year we will have thirty 2018 and 2019 intake apprentices from ACTOM divisions coming back to the Centre for six weeks of trade test preparation for their trade tests," Kobus remarked.

"Our future venture is to get accreditation for First Aid, health and safety, forklift driving and Learnership NQF 2 – NQF4 and other various learnerships," he concluded.



Kobus Swanepoel, who has got ACTOM's Technical Training Centre off to a flying start in providing apprenticeship training for various training institutions and programmes as well as for companies outside the group.

## NECSA Chairman Prof David Nicholls wins SAIEE's 'Engineer of the Year' 2021 award

Mervyn Naidoo, Group CEO of ACTOM, which sponsors the SA Institute of Electrical Engineers' annual Engineer of the Year award, presented the award for 2021 to Professor David Nicholls, Chairman of the Nuclear Energy Corporation of SA (NECSA), at the SAIEE's Awards evening in Johannesburg on March 11 this year.

The picture shows Professor Nicholls displaying the award certificate after being awarded the Engineer of the Year award, with Mervyn Naidoo

(left) and SAIEE President Prof Sunil Maharaj.

The award was made in recognition of Prof Nicholls' leadership in launching and leading the SAIEE Nuclear Chapter which consists of six active study committees in Science & Technology, Electricity Generation, Medical Applications, Environmental Impact, Education and Nexus of Applications for Local Industrialisation & Manufacturing.

"The Chapter has formed the foundation for the new Nuclear



Research Centre at the University of Johannesburg," Prof Maharaj said at the presentation.

## Enlit Africa Cape Town - An astounding success

In Enlit Africa, the premier energy and power exhibition & conference in Africa – formerly known as African Utility Week – ACTOM was named "Most Engaged Exhibitor" among the many companies and organisations which participated in the 2022 event at Cape Town's International Exhibition Centre from June 7 to 9.

"This award was in recognition of the extent to which the group's stand attracted attention and interest among visitors to the exhibition," commented Mamiki Matlawa, ACTOM's Group Business Development Executive.

"We also made contact with and had meetings with some important players in the industry, including power companies and other potential customers and partners in various countries in Africa. From this we've gained some valuable leads that offer exciting new business opportunities for ACTOM across the continent," she said.

ACTOM, which is a Platinum sponsor of Enlit Africa, hosted a cocktail dinner for VIP guests on June 7.

ACTOM Power Transformers used the exhibition as the launch platform for the innovative new online power transformers condition monitoring system it has developed over the past 18 months.

It was able to give live demonstrations at the exhibition of how the system provides constant feedback to owners and users of power transformers on all key condition data, including power output, harmonics and temperature, plus possible formation of gas in the oil which could threaten a transformer's functioning and efficiency.

"More than any other single item of electrical equipment, the power transformer is the main link between a business or utility and the national

power grid that keeps your business functioning," said Wilma Muller, Power Transformers' Sales Manager.

Among other equipment and systems that were displayed and given special prominence by the various ACTOM businesses that participated in the exhibition were ACTOM MV Switchgear's AMV12 range of air-insulated switchgear, which has proven to be highly successful since its launch into the market several years ago, and its similarly widely accepted RMV ring main unit, which has lately enjoyed a strong surge in demand in the marketplace (See story on Pg 16).

ACTOM High Voltage Equipment displayed its recently introduced CTB36Plus outdoor combo vacuum circuit breaker, with special emphasis being placed on its suitability and cost-effectiveness in serving as the link between renewable energy gen-

eration projects and Eskom's national power grid.

John Thompson deployed an advanced item of projection equipment known as HOLOCUBE to present in animated form the inner workings of its firetube package boilers and industrial watertube boilers to interested visitors to the ACTOM stand.

The other businesses exhibiting on the stand were ACTOM Distribution Transformers, ACTOM Protection and Control, ACTOM Electrical Machines and Current Electric.

ACTOM also featured in the Enlit Africa Conference, with a comprehensive and detailed presentation being made by Etienne de Villiers, John Thompson's Divisional Technical Manager, entitled "An overview of critical boiler parameters that influence reliability and performance"



Explaining some of the features and capabilities of MV Switchgear's RMV ring main unit to a pair of visitors to the ACTOM exhibition stand is Marius van Meygaarden, the division's Business Coordinator. Also on display (right) was AMV12, MV Switchgear's premier switchgear product.



## ACTOM – developing a South African future

**COVID-19 changed everything in 2020. The world as we knew it experienced unprecedented job losses, business closures and an increased dependency on government grants and specialised loans just to survive.**

Education systems were unprepared for the turmoil unleashed because of the pandemic and subsequent lockdowns. Schools, teachers, and administrators were forced to immediately build emergency remote-learning systems and, later, social distancing measures in many rural schools that were already overcrowded and ill-equipped. This threw the spotlight on access to digital devices, connectivity, having a quiet place to work, and the problem of stubborn inequality.

In South Africa, the reality was just as bleak, possibly even bleaker, as the education system is extensive, with approximately 13 million learners and unequal and socially graded schools. Although significant improvement has occurred, the achievement outcomes are still low, fragile, and susceptible to shocks. The COVID-19 pandemic has dealt the education system a significant blow, especially for the poor and vulnerable learners.

Better resourced homes and schools were able to move to digital forms of learning and proceed with standard curriculum coverage. Despite the best intentions, most learners had very little structured learning.

The South African education system, characterised by crumbling infrastructure, overcrowded classrooms and relatively poor educational outcomes, is perpetuating inequality and, as a result failing too many of its children, with the poor most brutally hit.

“For South Africa to comply with its own constitutional and international human rights obligations concerning education, major change is urgently needed,” said **Shenilla Mohamed**, Executive Director of Amnesty International South Africa.

Due to the education strain, ACTOM has become actively involved in developing communities near their various divisions and has seen great successes in the Balmoral College in Boksburg, achieving a 100% pass rate in previous years. **Sylvester Makamu**, HR Executive, ACTOM, says: “We are always looking at making a difference in our community. With our skills development programme taking off, it was time to look at the younger generation.



*ACTOM sponsors the tutoring of the top grade 11 and 12 students at Sizwe Secondary School in the STEM fields to prepare them for university entrance.*

We want to assist wherever we can to make a difference in a young person’s life. We saw what a difference our support has made to the scholars at Balmoral College, and we want to continue assisting wherever we can,” he added.

With the adoption of yet another school, ACTOM is actively involved in the growth and development of the youth at grassroots level. Sizwe Secondary School, based in Elandsfontein, Ekurhuleni, houses 1275 students with 34 educators, which ratios one teacher to every 60 students. Not only is this way overcrowding, but the principal and teachers face many other challenges. “The school is in dire need of maintenance. Not only does the school suffer from severe plumbing issues, but we also need a generator during load shedding,” said **David Khosa**, Sizwe School Principal.

Beyond infrastructure, other barriers that these children face to access a quality education include lack of sufficient transport, which often impacts their ability to access education and can put their safety at increased risk. Some children cross bustling main roads from the Knights area in Boksburg to the school in Elandsfontein. “There are no buses in the area that will ensure the children’s safety between school and home,” David Khosa added.

According to Makamu, “the school is in serious need of maintenance. We arrived in shoulder-height grass and had to walk over wastewater to access the classrooms and facilities, which is a

serious health concern. We will employ members from the immediate community to assist with the maintenance at the school, which will also create community employment. We will also assess the asbestos classrooms, plumbing, and various other issues the school faces and deal with it one bite at a time.”

The assistance and sponsorship to Sizwe Secondary School will not stop at just maintaining and improving the facilities, “we are looking at the bigger picture of ensuring the students will be able to further their careers and complete their studies,” said Makamu. ACTOM will sponsor the tutoring of the top 20 grade 11 and 12 students at Sizwe Secondary School in the STEM fields to prepare them for university entrance. In 2023, ACTOM will extend its support to include the top 20 Maths and Life Science students from grades 8 to 12 in this STEM programme. “We want to walk a path with these students to ensure that they will be able to complete their studies,” he added.

Sizwe Secondary School will, in turn, continuously assess participating students to ensure they remain in the top 20 in their respective subjects. The tutoring will take place after school and on weekends.

ACTOM recognises that the future prosperity of South Africa lies firmly in the hands of the youth, and as such, it will remain actively involved at grassroots level by assisting schools and parents, where possible, to ensure that as many as possible of the next generation reach their full potential.

## John Thompson awarded boilerserve contract for 7 Eskom power stations



*Celebrating their success are Gladstone Mbili (centre, holding the signed contract) and other members of John Thompson's B&E unit's tendering and negotiating team for the historic multi-billion rand boilerserve contract (from left): Batsirai Chidziya, Senior Estimator; Sonja du Plessis, Project Financial Controller; Des Oates, Regional Marketing & Commercial Manager; Morne Winterbach, Senior Estimator; Martin Speek, Regional Sales & Proposal Manager; and Richter Mulder, Proposals Engineer.*

**In the biggest single contract ever won by ACTOM, Eskom has awarded a multi-billion rand boilerserve contract to John Thompson's Utility Boilers & Environmental (B&E) business unit for seven of its coal-fired power stations.**

The four-year contract adds Lethabo, Matla and Medupi to the four stations Matimba, Komati, Tutuka and Grootvlei for which the B&E unit was responsible under the previous round of boilerserve contracts, with these four again being included in the latest contract.

Eskom issued a tender for new boilerserve contracts for its entire fleet of coal-fired power stations – including the new Medupi and Kusile plants – in late-2018.

**Gladstone Mbili**, the B&E unit's General Manager, said: "We submitted our tender for all the plants in October 2018 and in mid-2019 Eskom visited our premises in Isando to carry out an evaluation of our technical and other relevant capabilities. Then in April 2021 we were called in to participate in negotiations, which ran up to November. In early-December Eskom made the

award of the contract to us for the seven stations. The contract itself kicked off on January 1 this year."

Commenting on his unit's success in winning the multi-billion rand contract, Gladstone said: "We're very proud at having achieved this. I'd like to recognise the people in our organisation who helped us prepare the tender and negotiated the contract to a point of reaching an agreement with Eskom."

He added: "The bid was most complex and comprehensive and required extensive effort and protracted working hours."

## B&E business unit signs cooperation agreement with power generation technologies leader

**John Thompson recently signed a cooperation agreement with STEAG Energy Services GmbH of Germany, a reputable international organisation specialising in providing services for power assets.**

"The agreement, which came into effect in April this year, provides John Thompson's Utility Boilers & Environmental (B&E) business unit with access to global skills and experience in the power generation field, as well as access to valuable software programs to assist with the introduction of modern solutions for the traditional markets as well as in the field of renewables," said **Gladstone Mbili**, General Manager of the B&E unit.

"The introduction of STEAG's expertise will enhance our ability to service our customers in the power generation industry, with the ability to offer technical, operational and com-



*Gladstone Mbili, General Manager of John Thompson's B&E unit, and Andreas Michalke, STEAG's Head Global Sales, sign the cooperation agreement.*



missioning advice. STEAG has over 40 years' experience in owning, planning constructing and operating power plants totalling over 11 000MW."

In addition to traditional coal-fired technology, STEAG has considerable experience in the renewable energy field, offering hydro, wind and solar capabilities and experience. STEAG also offers a comprehensive range of software modules to assist in the performance optimisation of facilities.

Services already offered by the B&E unit in the local market include boiler maintenance and upgrades, coal

mill maintenance and refurbishment, electrostatic precipitator maintenance, upgrading and retrofitting, and fabric filter retrofitting and maintenance.

"All projects and services are managed in-house, and we are mostly elected as main contractor on the projects we are involved in. All services offered are backed by 24/7 engineering support and commissioning services," said **Des Oates**, Regional Marketing & Commercial Manager for the B&E unit.

The B&E unit's boiler outage services have been used for many years by several power stations.

"We maintain a low weld repair rate as part of our boiler outage management excellence commitment for our customers. We also have in-house metallurgical and non-destructive testing capabilities," Des added.

In addition, the B&E unit has many years of coal mill maintenance experience and has its own locally developed pulse jet fabric filter technology specific to utility boilers. It also offers maintenance services and specialised engineering support.

## B&E unit's steel fabrication facility and LH Marthinusen initiate manufacturing partnership

**Early last year Pieter van de Walt, General Manager of LH Marthinusen's Rotating Machines division, approached Rudolf Jooste, Manager of the steel fabrication facility at John Thompson's B&E business unit in Isando to request use of the facility's laser cutting machine for profiling of laminated plates required for refurbishment of electric motors.**

He explained that his division's own laser cutting machine was no longer useable due to wear and tear from long use.

Rudolf was more than willing to provide this service as the laser cutting machine, which is primarily used as part of the process of manufacturing and repairing spares in support of John Thompson's extensive customer-base of package boiler and industrial water-tube boiler users, had sufficient spare capacity to perform the lamination profiling work on a continuous basis.

After conducting a trial run to demonstrate the fabrication facility's ability to meet the division's requirements, an agreement between the two parties was reached in mid-2021.

But it didn't stop there. LH Marthinusen's Transformer division, which had been outsourcing the profiling of platework for its transformer tanks as well as for manufacture of the tanks, was quick to recognise that the B&E unit's ISO 3834 welding accredited steel fabrication facility offered a far better option – both in terms of quality and price – than its existing arrangements for this work.

A further deal was therefore soon

settled whereby Rudolf's facility took over the profiling and manufacturing work required by LHM's Transformer division – again to the satisfaction of both parties, especially since the fabrication facility's laser cutting machine still had sufficient spare capacity to perform the additional profiling work required.

"These arrangements between LHM and ourselves make very good

business sense. It is especially welcome to us at the steel fabrication facility because it helps us to utilise the laser cutting machine to a maximum, therefore making it more financially efficient," Rudolf commented.

"Any other ACTOM division that needs profiling work done must feel free to approach us and we'll be happy to assist," he added.



*Operator Amelia Mokone is shown profiling laminations for LHM's Rotating Machines division on John Thompson's steel fabrication facility's laser cutting machine in Isando in accordance with the recently arranged cooperative partnership.*

# ACTOM Industry completes three large mine winder upgrade contracts simultaneously

ACTOM Industry achieved a “first” in December last year by completing three large mine winder upgrade contracts during that brief period.

The multi-million rand contracts were for Anglo American Platinum’s Amandelbult mine near Thabazimbi, Limpopo Province, Harmony’s Moab Khotsoeng gold mine in Orkney, North West, and Sibanye Stillwater’s Kloof mine in Carletonville, Gauteng.

“Having all three contracts close to completion at the same time is an unusual occurrence. We saw it as an opportunity we couldn’t afford to miss to set out to complete all three by taking advantage of the mining industry’s end-of-year shutdown to do so,” said **Janna Kapp**, ACTOM Industry’s General Manager.

“But to do so successfully meant having to carefully plan and coordinate all the work required across the three contracts to ensure that they were completed without a hitch. We found this very challenging at times, since in some cases senior team members were required to work on more than one project, necessitating having to reschedule procedures to ensure that the times when these specialist technicians and managers were needed didn’t clash,” he explained.

The three contracts were:

- Amandelbult’s Tumela shaft DC rock winder power equipment and control

equipment upgrades. This contract was awarded to ACTOM Industry in December 2020.

- Moab’s Khotsoeng shaft’s DC dual-purpose (man/rock) winder control system upgrade, awarded in October 2020.

- Kloof’s Manyano sub-vertical shaft DC rock winder control equipment upgrade, awarded in May 2021.

All three contracts comprised upgrading of obsolete electronic equipment that had been originally designed, supplied and installed by ACTOM Industry in conjunction with its Europe-based principal at the time. In all of the upgrades the high capital value existing original DC winder drive motors were retained coupled to the original retained mechanical equipment.

The Tumela rock winder scope included an upgrade from a Ward Leonard system (M-G set) to a modern thyristor-controlled drive. The static (or solid state) thyristor-controlled DC drive upgrade eliminated the inefficiency and routine maintenance of the rotary M-G set, which it replaced.

All three upgrades included a new ACTOM Q closed-loop drive regulation and control system. The control system is a state-of-the-art distributed control system using ether CAT to communicate to distributed I/O nodes from a central IPC. The host IPC microcontroller executes the control sequencing

and safety logic of the winder system. The new regulation system offers the most modern upgrade/retrofit solution from analogue and older digital controllers. The closed-loop regulator provides true torque control and prediction and a number of feed-forward torque signals which ensure ideal control of the winder.

The Moab Khotsoeng control and regulation upgrade also included a closed loop brake control system upgrade. ACTOM Industry was the original pioneer for closed-loop brake control electronic systems in Southern Africa and numerous systems have been successfully supplied for high production hoists from deep levels since the early 1990’s.

Closed loop brake systems are used to reduce the strain on winder ropes during emergency braking conditions. This is achieved by a smooth transfer of torque from the electrical drive to the brake system. The speed and retardation rate of the winder drums and conveyances are accurately controlled and shaped during emergency stopping. This reduces the dynamic rope loads, thereby making deeper winding possible and extending rope life. Independent control units control independent brake units/channels to enhance the reliability and safety of the braking system.



Posing in front of a winder regulator and control panel are some members of the ACTOM Industry project team that contributed to the Tumela Rock Winder upgrade project (from left): Ash Moodley, Acting Production Supervisor; Juan Goosen, Project Manager; Busi Msimango, Electrician; Sam Vanzula, Site Manager; and Mbongeni Nkosi, Applications Engineer.



## Power Systems awarded refurbishment contracts for fire-damaged substations



EPWP candidates assist with a wiring alteration on an AMV12 switchboard control cubicle under the watchful eye of Site Supervisor Kaizer Sithole at a substation in Tshwane that ACTOM Power Systems refurbished recently.

**Earlier this year the City of Tshwane awarded two contracts worth R200-million to ACTOM Power Systems to revamp a couple of substations which were both ravaged by fire.**

The substations are the 132/11kV Pyramid substation in the Rooiwal area and the 132/11kV Kentron substation in the Highveld Park area of Centurion.

In both instances the initial focus shall be on constructing new control and switchgear buildings to house the replacement equipment destroyed by the fires.

Thereafter Power Systems will supply, install and cable up a total of 109 new 11kV switchgear panels – 49 for Pyramid and 60 for Kentron – in the new buildings, including associated protection schemes, a SCADA overlay and DC chargers with battery backup.

The replacement 11kV switchboards will consist of the modern premier class AMV12 brand of switchgear developed by ACTOM MV Switchgear in conjunction with an international partner in recent years and now well-

proven and widely used in the local market.

The new protection and SCADA panels will be sourced from ACTOM Protection & Control, while ACTOM's Static Power business will supply the DC systems.

The secondary plant portion of the contracts is being given highest priority to restore the fire damage. "Impromptu repairs were carried out by the municipality to restore power supply as quickly as possible, but the longer-term security of supply shall remain compromised until permanent solutions are implemented, which is what we are doing now," said **John McClure**, Power Systems' General Manager.

These contracts also include a range of new 132kV gear to replace aging equipment in the outdoor yards, so both substations will receive a total facelift by the end date which will be executed over the three-year contract term, as annual funds are released.

The outdoor equipment will com-

prise 132kV circuit breakers, isolators, current transformers, voltage transformers and surge arrestors – all to be supplied by ACTOM High Voltage Equipment. In addition, the cable and cabling accessories required for the works shall be sourced from ACTOM Electrical Products.

For both contracts Power Systems is obligated to involve and up-skill local labour under the Extended Public Works Programme (EPWP) and earmark sections of work for local subcontractor participation to develop small businesses from the surrounds.

"These provisions emanate from the Preferential Procurement regulations of 2017 and strike a delicate balance between appointing a reputable contractor with the capacity to be held accountable for contractual delivery; while ensuring that vulnerable and marginalised sectors of society are brought into the fold in a meaningful way," said John.





## Glencore's Arthur Taylor Colliery adopts ACTOM Signalling's well-proven yard control system

ACTOM Signalling, which has made a name for itself countrywide for its development of a simple and efficient semi-automated yard control system for use in shunting yards as a viable and less expensive alternative to a fully-fledged signalling system for that purpose, recently completed its 26th yard control system installation.

Signalling's yard control system – the only system on offer that has Transnet approval – is also far superior to the traditional manually operated system that has been in use for many years.

The business unit was awarded its first contract for installation of the system at 11 railway yards countrywide in 2012 by Transnet Capital Projects on behalf of Transnet Freight Rail (TFR), followed by the award of a further contract in 2015 for installation of the system at another 13 yards countrywide. Then in 2018 TFR awarded Signalling a contract to install its system at Ermelo Yard in Mpumalanga to replace a semi-automated system that had been supplied and installed there by another signalling company several years earlier, but had proven to be unreliable.

This brings the total number of TFR yards that have had semi-automated yard control systems supplied and installed by Signalling to date to 25. All these systems replaced the unwieldy traditional manual system.

The latest award in mid-2021 came from Glencore's Arthur Taylor Colliery (ATC) near Ogies in Mpumalanga, the yard control system in this case replacing a dated signalling system.

The electronic interlocking systems of standard signalling have a safety integrity level (SIL) rating of 4, whereas the interlocking system of ACTOM Signalling's yard control system is based on SIL2 technology, which is



One of three point sets with indicator that form part of the semi-automated yard control system ACTOM Signalling installed recently on the line serving ATC's Impunzi mine's loadout station. The coal silo above the loadout station is seen in the background.

considered suitable for the less demanding application to which it is put compared with the more complex and demanding application of monitoring and controlling main line traffic that a standard signalling system is required to perform.

The contract for ATC, which was completed in April this year, involved the supply and installation of a yard control system to serve ATC's Impunzi

mine's loadout station located on a siding linking up to the main line to Ermelo.

"Among the many reasons for this system's cost effectiveness is the use of a locally developed axle-counter system which is substantially cheaper than an imported mainline axle-counter," stated **Trevor Hann**, the Project Manager for the contract.



## MV Switchgear awarded switchboards contracts for new Kamoakakula copper mine in DRC

Two contracts worth more than R135-million have been won by ACTOM MV Switchgear for surface and underground MV switchboards for the massive new Kamoakakula copper mining project in the Democratic Republic of Congo (DRC).

The contracts, awarded by DRA Global of South Africa, the engineering consultants for Canada-based Ivanhoe

Mines, one of the main stakeholders in the project, are for manufacture, supply, installation and commissioning of switchgear and associated equipment for 11kV substations at the new mine.

A total of 233 switchgear panels have been supplied and installed to date, with more due to be added as the contract for the underground substations is extended.

The Kamoakakula mine, which

commenced production in May last year and is projected to achieve an output rate of 7.6-million tonnes of ore per annum by the third quarter of this year, is estimated to have reserves containing high-quality copper lasting in excess of 40 years.

Kamoakakula, which is being powered by clean renewable hydro-generated electricity, is a joint venture between Ivanhoe Mines of Canada, Zijin



Mining Group of China, each holding a 39.6% share, and the Government of the DRC, which holds around 20%.

The first contract awarded to MV Switchgear, covering the equipment for the surface substations, was awarded in October 2019 and was completed as scheduled at the end of 2020. It

comprised a total of 140 switchgear panels housed in eight substations.

The second contract, for the bulk of the underground substation equipment, was awarded in the third quarter of 2020 and is currently in progress.

**Okkie van Zyl**, MV Switchgear's Commercial Manager, said in early-

June this year that the completion date for the underground substations contract had not yet been determined. "This contract is still open and is likely to be extended, so at this stage we aren't able to say what the total number of switchgear panels incorporated in it will finally be," he commented.

"To date, in early-June, we supplied 93 panels, which we have installed along with all the required associated equipment in five underground substations so far," he added.

All the switchgear, for both the surface and underground substations, comprise MV Switchgear's well-known and widely used SBV4E range of switchgear, with ratings up to 12kV, 31,5kA and 2500A.

The majority of the rest of the equipment forming part of these contracts is supplied by ACTOM divisions and business units, namely ACTOM Protection & Control for the protection & control panels and the protection schemes serving the transformer/automatic voltage regulator (AVR) panels, Static Power for the battery trip units and ACTOM Distribution Transformers for the NER/NEC's.



An array of switchgear panels in one of the eight surface substations at Kamoia mine that MV Switchgear has manufactured, supplied and installed the equipment for, with many more still due to be supplied for the mine's underground substations.

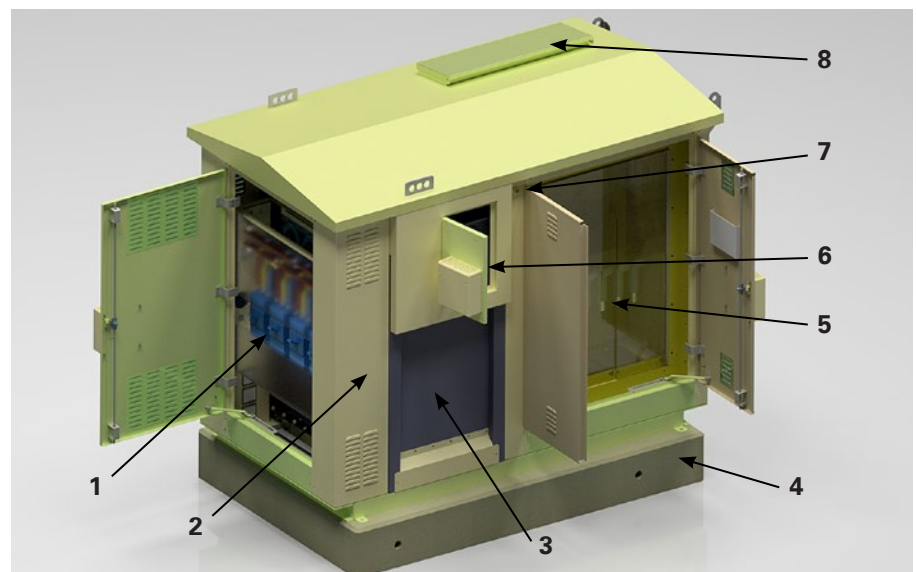
## MV Switchgear manufactures B and C Type minisubs for residential developments in Cape Town

ACTOM MV Switchgear was recently contracted by electrical engineering consultants for the City of Cape Town to design, manufacture and supply Type B and Type C minisubs for residential areas where these types of minisubs are required for distribution of power.

"Cape Town is unique in the country as a user of Type C minisubs, while Type B minisubs are used in other parts of Cape Town and most other urban areas around South Africa," said **Rhett Kelly**, MV Switchgear's Design & Development Manager.

"Both B and C Type minisubs incorporate a medium voltage ring main unit to enable the minisub to be incorporated in the MV ring type cable networks – enabling the efficient re-configuration of the network to restore power in the event of an MV cable fault," he explained.

"Whereas minisub primary voltage for most of South Africa is 11kV, for the City of Cape Town the Type B and Type C minisub primary voltages are 11,5kV and 11,66kV respectively.



**Type C minisub 1)** low voltage compartment with outgoing feeder circuit-breakers and auxiliary equipment, **2)** IP44 minisub enclosure with flush mounted doors, **3)** 800kVA 11,66/420V power transformer, **4)** concrete plinth for Type C minisub layout, **5)** internal arc classified medium voltage compartment with ring main unit, **6)** low voltage compartment for transformer oil level indicator, tap switch and rating plate, **7)** earth fault indicator LED remote indicating unit, **8)** internal arc pressure relief device.

"The type C layout differs substantially from the others. For example, it has a smaller footprint than the Type B

minisub and the layout of the ring main unit and other components is config-

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ured differently from the other two types," Rhett commented.

"The low voltage compartment has been designed with dimensions aligned with the overall minisub enclosure so as to provide an aesthetically pleasing appearance – a unique feature of the ACTOM design," he added

The recent orders, received via

ACTOM Electrical Products' Cape Town branch, were the first MV Switchgear has had for the City of Cape Town.

The first, placed by the Cape Town based electrical engineering consultancy Raubicon in mid-2021, was for two Type B minisubs for a new residential development in Pinehurst, Cape Town. The contract, completed and delivered

in November last year, was for 315kVA and 800kVA minisubs.

This was followed at the end of 2021 by an order from GJA Consulting Engineers for a single 800kVA Type C minisub for a major development currently under way in Guguletu near Cape Town International Airport.

## MV Switchgear sees surge in demand for its popular RMV fixed pattern secondary switchgear

**ACTOM MV Switchgear has recently had an upsurge of orders for its well-known RMV gas-insulated fixed pattern secondary switchgear.**

The RMV switchgear is available in both non-extensible and extensible formats. The latest spate of orders have included RMV indoor switchboards incorporating extensible units for a variety of secondary distribution substations.

"We were awarded a 12-months' contract in April this year by Eskom KwaZulu-Natal for various remote-controlled coastal-spec outdoor free-standing non-extensible RMV ring main units for use in the utility's MV distribution networks in the province. To date we have already received orders for over 50 units," said **Rhett Kelly**, MV Switchgear's Design & Development Manager.

The contract award was preceded by a thorough evaluation Eskom conducted into the RMV range of switchgear on offer by the division.

"The internal arc classified RMV solution supplied to Eskom is fully motorised to allow for remote operation, using an open/close pendant control unit. We developed a 24V DC portable battery pack which can be plugged into the ring main unit to provide a temporary DC supply for the remote opera-

tion of the switchgear, as required by the customer," Rhett explained.

Other orders received over the past year include RMV indoor extensible gear for two switchboards ordered by First National Batteries in July last year for installation in its manufacturing plant in Benoni to replace and upgrade the indoor switchgear equipment previously in use there. One of the units is the internal intake substation from Ekurhuleni Metropolitan Municipality and the other is the distribution board for the factory.

"The switchboards consist of a combination of extensible RMV functional units, including circuit-breaker panels, a metering panel, a battery terminal unit and a remote control cubicle," Rhett stated.

Orders have also been placed with MV Switchgear by Reyrolle Pacific Switchgear in New Zealand for two non-extensible outdoor free-standing RMV units, which will be installed at a power generation plant at South Tarawa, a remote island in the middle of the Pacific Ocean. They require a specially developed Grade 304 stainless steel IP54 enclosure with ACTOM's type tested C5 corrosion class paint system, due to the close proximity of the sea and the tropical climate.

Another purchaser was a security



*One of the RMV units supplied to Eskom KZN recently, complete with portable battery pack (bottom right) for remote operation.*

company based in a neighbouring state that ordered an RMV indoor switchboard incorporating extensible circuit-breaker panels, switch-disconnector panels and a bus section panel in October last year on behalf of the state's defence force to serve as a main intake substation at one of its military camps.

## LH Marthinusen's innovative solution for on-site repair of large diesel power plant alternators

**An innovative solution was devised by a repair team from LH Marthinusen (LHM) when it was required to perform on-site repairs on six large 11155kVA alternators in a diesel power plant in Zambia's Copperbelt.**

The plant, which generates power for the city of Ndola, is owned by the state's Ndola Energy Company and

managed and operated on its behalf by Cape Town based Wartsila South Africa, which contracted LHM's Rotating Field Services division to identify faults in the alternators and perform the repairs found to be required.

"Due to the large size of the alternators, especially the great weight of each rotor, we had to devise a special solution to enable us to do the repairs

on site," said **Wesley Houghton**, Large Rotating Machines's Field Service Manager.

"The fact that the heavy rotor could not be moved out of the way to give us access to the stator in each case meant having to devise an alternative way of gaining access to the entire length of the core," he explained.

After an on-site inspection conduct-



ed by Senior Field Services Technician **Frans van der Merwe**, the team designed and had manufactured locally a special platform as a support structure for the stator. In this way the stator of each machine could be kept in position to be opened and worked on while the rotor was held in suspension, with the drive-end of the rotor still located in the bearing housing.

Once the work was complete the stator and rotor could be re-assembled easily and the team then repeated the process on the other machines.

"We found on inspection that in each of the six machines some stator core wedges had been dislodged and destroyed during operation and had to be replaced," said Wesley.

A total of about 25 newly-manufactured wedges were required for all six machines to replace those lost. "This represents a very small proportion of the total," Wesley pointed out.

The replacement stator core wedges were manufactured at LHM's main repair facility in Denver, Johannesburg.

Each rotor and stator when disassembled was cleaned individually using



*JP Cloete, a Field Service Technician of LHM's Rotating Machines division, is shown removing air filters from one of the six large alternators the field service team repaired on site at the diesel power plant serving Ndola in Zambia.*

dry ice and each entire unit was also dry ice cleaned. The repair team also removed the drive-end and non-drive-end bearings of the alternators for bearing inspection, cleaned the housings and fitted new bearing housing insulation.

"In addition, we checked bearing

clearances and conducted electrical tests comprising an insulation resistance test and a polarisation index test," Wesley added.

Three separate trips were made by the team between February and July last year to perform the required work.

## R&M's partnership with AC Hargreaves opens door to Australian dragline market

**Reid & Mitchell (R&M) and AC Hargreaves (ACH), a Brisbane-based repairer of industrial electrical equipment, have signed a representation agreement aimed at hastening ACH's penetration of the Australian opencast coal-mining market as a supplier and repairer of electric motor components of draglines and off-highway dump trucks.**

ACH is seeking to boost its market share with the help of R&M, which enjoys a worldwide reputation for its technical knowledge and experience of the motors and equipment used in both draglines and off-highway trucks.

"We make components to our own drawings and designs, which we have developed over the years as replacement components for the OEM machines. Our components have won widespread acceptance as they are equivalent and fully interchangeable with the original components," said **Mike Shaw**, R&M's Divisional CEO.

"In terms of the representation agreement, which came into effect in September last year, ACH's scope of work is supply of components and

engineering services to the repairs of draglines and off-highway vehicles. It authorises them to trade R&M's products and provide technical support and repair services to customers under R&M's guidance.

"Our intention is to supply consignment stock to enable them to achieve quick turnarounds in serving their customers. The components from R&M

are cost-effective on a global scale, which gives ACH a significant advantage in their market," Mike added.

The agreement's initial focus is on draglines, with similar support for off-highway vehicles to be introduced in the near future.

"We see this as a huge opportunity for R&M and ACH to jointly open up a

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*Some of the dragline motors recently brought in for overhaul and repairs at AC Hargreaves' Brisbane workshop.*

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major market with significant growth potential. Australia, with over 70 draglines operating, is the second largest user of draglines in the world after the United States. However, for us the local market has dwindled, with only about a dozen machines still operating in South Africa," Mike pointed out.

"This partnership venture with ACH therefore represents an exciting revival of what was formerly a major market for R&M and provides us with a golden opportunity to make good sales of our well-proven dragline products and services into a new market. We're delight-

ed to have established this relationship with ACH, which is a diligent company with very professional management and a strong reputation," he remarked.

To date ACH has placed two orders with R&M under the agreement. The first, delivered early this year, was for the manufacture and supply of a set of six interpole coils, while the second order, placed in May, is for the manufacture and supply of a complete generator armature.

**Joe Galdies**, ACH's Divisional Manager, Mining, said: "We look upon this partnership as a milestone in the

development of AC Hargreaves and as providing huge opportunities for both Reid & Mitchell and ourselves. Strong synergies exist between the two companies that auger well for a long and fruitful partnership."

In addition to the repair and support services ACH provides to the Australian opencast coal-mining market, it is well-established throughout Australasia as repairers and refurbishers of power generation equipment, transformers, traction motors and industrial rotating equipment.

## Namibia Armature Rewinders relocates to Walvis Bay

**Namibia Armature Rewinders (NAR) has relocated to Walvis Bay from Swakopmund in order to be more easily accessible to customers and potential customers than previously.**

The move by NAR to Walvis Bay was made during the last quarter of 2021 and it was fully operational at its

new premises in the central Industrial Area of Walvis Bay by December 2021.

"Although Swakopmund is only 40km away from Walvis Bay, some customers were put off by this from making use of our services. Now there's been a strong upsurge in our business since we made the move,

due to our easier accessibility to customers," commented **Johan Smeer**, NAR's General Manager.

NAR's new premises are also substantially larger than previously, occupying a total area of 2500m<sup>2</sup>, with workshop space of 2000m<sup>2</sup>, office space of 250m<sup>2</sup> and a yard area of 250m<sup>2</sup>.

"We have also acquired some important items of additional equipment, including a second overhead crane and two jib cranes, which have enabled us to increase our work capacity. At the same time we have increased our workshop staff complement by seven to a total of 27 employees," Johan stated.

The main business of NAR, a business unit in the Reid & Mitchell division, is electric machine rewinds for the fishing, mining and oil offshore industries. It has also recently expanded the scope of its operations to include transformer oil purification for LH Marthinusen, boiler service work for John Thompson and hydraulic service work for ACTOM Energy.



NAR workshop employees (from left) Hoseas Ganaseb, Coilmaker; Titus Igonda, Electrical Fitter; and Aubrey Meyer, Workshop Foreman, after completing refurbishment of the stator of the main generator of a locomotive at the business unit's Walvis Bay premises.

## M&C redesigns and supervises stator rewind of 'zone certified' 17MW compressor drive motor

**A large local petrochemical company requested Marthinusen & Coutts (M&C) in mid-2021 to take the lead in the redesign and quality management of a stator rewind process for a 17MW compressor drive synchronous motor that had failed during operation.**

The motor is a hazardous area zone certified motor as it operates in a potentially extremely explosive environ-

ment of hydrogen and acetylene gas.

"A company performing any work on a zone certified motor is required to be specially certified for this," said **Craig Smorenburg**, M&C's Works Executive.

"As we are not certified for it ourselves, we partnered with a local OEM that has this certification and they performed the work under our supervision and in close consultation

with us, the client and an independent zone certification authority."

In addition to overseeing and quality-managing all the work done, M&C's engineering team assigned to the project was required at the client's request to recalculate the modified winding and core design for the stator.

"A complicating factor was that a new specification for motors of this type had been introduced recently,



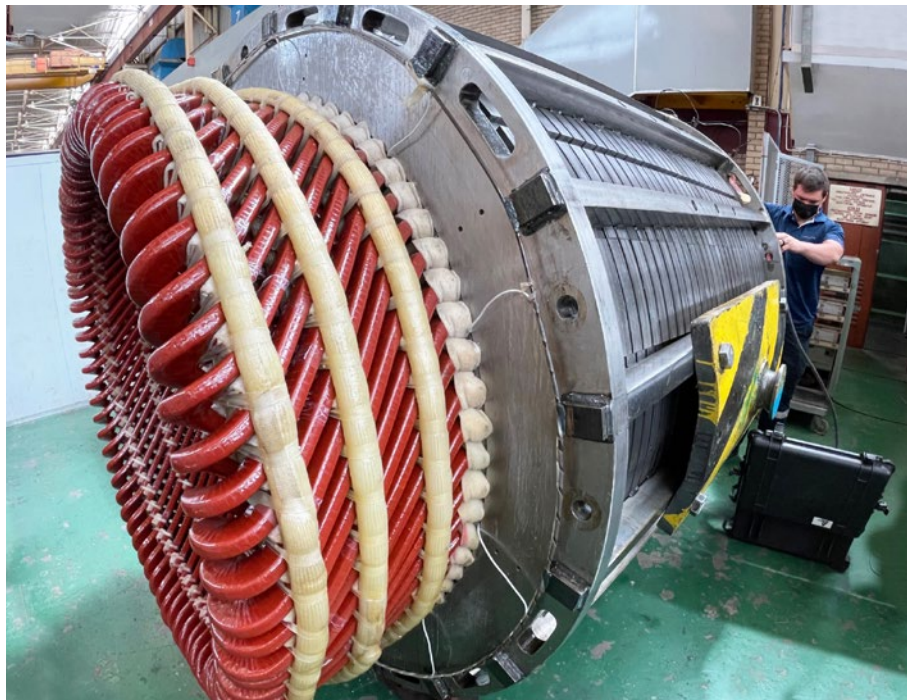
which necessitated having to obtain guidance from the inspection authority to ensure that the new spec was properly adhered to," Craig pointed out.

The work performed by the zone certified OEM consisted of manufacturing a new stator core and coils in accordance with the applicable voltage and zone certification requirements and performing the rewind as designed by M&C and the OEM.

It was the first stator core rewind for a zone certified compressor drive train motor to be performed in South Africa.

The work culminated in a successful test run of the repaired and reassembled motor in M&C's Cleveland plant at the end of February this year.

This again demonstrates M&C's design, engineering and test capability and their flexibility to partner with various OEM's to assist customers in providing the best possible quality solution.



The 17MW stator in preparation for testing.

## M&C performs complex breakdown repair of failed aging 30MW generator rotor

**Over a period of less than five months Marthinusen & Coutts' (M&C) recently performed comprehensive repairs to the rotor of an aging 30MW generator which had failed during operation at Sappi's Saiccor pulp mill in Umkomaas, KwaZulu-Natal.**

The Jeumont Schneider 31 250kVA 2-pole generator had been operating in the mill for over 30 years. M&C took delivery of the 12t rotor at its Power Generation & Large Motor repair facility in Benoni for investigation and repair in August last year.

The scope of work by M&C was monitored and witnessed at hold points by client third party TG specialist Sebenzana Consulting and Sappi Mill & Regional Head Office Engineers.

The investigation revealed zero value insulation resistance in the rotor, due to arcing having occurred between one of the coils and the coil retaining ring. Severe arcing on the rotor body landing had also occurred. Tests conducted by the investigation team established that the arcing had been caused by negative phase sequence currents.

"In addition, there was an open circuit in one of the rotor coils that had resulted from thermal cycling fatigue,

as well as damage to the windings caused by overheating resulting from the overhang insulation having shifted over time, thereby blocking access of ventilation to the windings," said **Rudi Els**, General Manager of the Power Generation & Large Motor facility.

The repair procedures carried out on the rotor to enable the generator to be returned to service in the mill were:

- Complete rewinding of the rotor using new locally-manufactured windings to replace the old. The rewinding process, which included brazing of a total of 2500 joints, took four weeks to perform, working double-shifts

throughout that period.

- Manufacturing two new coil retaining rings (CRR's) by a reverse engineering process, including drilling 132 ventilation holes in each. "These were made of forgings which we arranged to have manufactured in Germany according to our specifications. Our sister division ACTOM Turbo Machines then machined the forgings and drilled the ventilation holes in the CRR's," Rudi explained.

- Designing and manufacturing a damper winding for the rotor to prevent any recurrence of arcing on the rotor

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Sappi's 30MW generator rotor undergoing dimensional checks in M&C's 140t precision lathe that takes a 40t work piece, 11m long and a swing of 3.2m.

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body landing and on the CRR's. The rotor had not originally been fitted with a damper winding. "The introduction of a damper winding meant we also had to drill ventilation holes in the damper circuit to line up with the CRR's' ventilation holes," said Rudi.

The rotor damping circuit winding was designed by Sebenzana Consulting and fabricated by M&C subcontractors.

The repair process was concluded by performing a high-speed balancing procedure on the rotor. It was returned

to the Sappi plant a week before Christmas last year and recommissioned in the plant on Christmas Day.

"This once again demonstrates M&C's widely-recognised capability to perform complex repairs in quick time," Rudi commented.

## ACTOM Turbo Machines signs exclusive agreement with US-based OEM

**In July last year ACTOM Turbo Machines signed an exclusive channel partnership agreement with US-based Rotating Machinery Services (RMS) to sell and support Allis-Chalmers compressors in Southern Africa.**

There is a substantial userbase of this product in the region.

Within only a month of the agreement being signed ACTOM Turbo received its first order, which came from a pulp mill in KwaZulu-Natal where an Allis-Chalmers single stage overhang compressor that had long been in use failed while in operation. The compressor operates in the mill's sulphur plant.

After taking delivery of the rotor and impeller of the compressor at its Sasolburg workshop, ACTOM Turbo found upon investigation that the rotor journals had become worn after long use.

"We recommended to the client that the shaft be completely repaired, involving micro-welding of the entire shaft to build it up above spec and subsequently have it machined to spec to make it as good as new. This was agreed to," said **Jurie Erasmus**, ACTOM Turbo's Projects & Business Development Manager, who is also



*Jurie Erasmus with the rotor and impeller of an Allis-Chalmers single stage overhang compressor from a KwaZulu-Natal pulp mill after completion of repairs on them at ACTOM Turbo's Sasolburg workshop.*

the Channel Partner Manager for RMS in South Africa. The repair work was completed in November last year.

Jurie pointed out that ACTOM Turbo's exclusive channel partnership agreement with RMS was finalised only a short while after RMS had

purchased the intellectual property of Allis-Chalmers compressors from their former owner.

"In terms of the agreement we have the exclusive right to sell, repair, install and maintain them in this market under licence to RMS," he said.

## Metalplus gains ISO 14001 and ISO 45001 accreditations

**Metalplus recently succeeded in meeting the stringent standards of the International Standards Organisation (ISO) with respect to the environmental and health & safety requirements applicable in factories and workshops.**

In February this year the division won ISO accreditation in both fields – ISO 14001:2015 for environmental and ISO 45001:2018 for health & safety – to add to the ISO 9001:2015 quality accreditation it has had since November 2018.

"These three ISO accreditations together add up to an awesome array of credentials that put us in the strongest possible position in our field to meet the stipulated ground rules applicable to most large projects nowadays," said **Roman Mornau**, Metalplus' Divisional CEO.

"What this means in essence is that having these accreditations in our back pockets every time we tender for a project automatically puts us at an advantage over any competitors who don't possess them, because

the accreditations answer all the key questions that the project owners want answers to as a matter of course without any further questions having to be asked relating to the supplier's basic quality of workmanship, the environmental procedures he consistently observes and the health and safety measures he applies every day with respect to his employees."

Late last year Metalplus adopted a web-based safety, health, environmental & quality management (SHEQ) app to replace traditional methods of



recording, monitoring and updating the documentation and prescribed procedures applicable to each in accordance with ISO requirements.

“The SHEQ App handles this work

very efficiently as it is a highly structured system that makes retrieval of documents almost immediate and provides a platform where all SHEQ documents are up to date for all busi-

ness processes as well as all legal requirements, including the legal register,” said Roman.

“Once all the relevant information has been entered it provides overall management of all the required procedures by prompting our dedicated SHEQ Controller and managers for updating of documents when the times for them to do so fall due.

“The SHEQ App has enabled us to do without a fulltime SHEQ Manager on site and we now share the SHEQ Manager of another ACTOM division that earlier put in place the same web-based SHEQ App to manage their operations in accordance with ISO requirements, as, like us, they too have accreditation for ISO 9001, ISO 14001 and ISO 45001.

“A further significant benefit of the SHEQ App is that it runs at about half the cost of a traditional system. Auditors are able to review data remotely online prior to site visit verifications, so reducing the cost of audits,” Roman added.

Metalplus is one of only a very few divisions and business units in ACTOM that have all three of the above-mentioned accreditations.



Proudly displaying Metalplus’ new ISO certificates in front of the gates of the division’s workshop are Workshop Manager Nobby Nobrega and SHEQ Coordinator Marinda Kruger.

## Electrical Products’ Pretoria branch pips Johannesburg to win ‘Branch of the Year’ prize

The new Manager of Electrical Products’ Johannesburg branch, Abram Mathabatha, led his team in an impressive performance in attempting to win the highly contested top spot in the business unit’s “Branch of the Year” competition for 2021/22.

However, Johannesburg was finally pipped at the post by the closest of margins by the Pretoria branch, led by Branch Manager **Coert Snyder**, to win the prize and trophy, with Johannesburg having to settle for the Runner-up award.

“Johannesburg has been performing exceptionally well under Abram’s leadership since he took over as Branch Manager nine months ago, so Pretoria and the other leading contenders will have to be very much on their toes if they are to prevent him and his team from winning ‘Branch of the Year’ next time round,” commented Divisional CEO **Rod Penaluna**.

Electrical Products’ three-day annual conference in May – of which



Debtors Clerk Beauty Ntladi (front centre) proudly displays the “Branch of the Year” trophy, accompanied by all the other members of the Pretoria branch team, including Branch Manager Coert Snyder (fourth from left) and Regional Manager Fritz Hattingh (back, behind Beauty Ntladi).

the “Branch of the Year” competition results announcements form a part – usually takes place in South Africa, but this year it was held at Victoria Falls in Zimbabwe.

Among a range of other awards that

feature in the competition, the “Most Improved Branch” award winner was Cape Town, with Welkom as Runner-up. Johannesburg earned first place in the “Best Sales Team” contest, with Cape Town coming second.

# Versatile modular substation AC and DC distribution panels welcomed by customers

Static Power has introduced modular auxiliary AC and DC distribution panels for electrical substations into the market.

The highly versatile modular panels have been developed by ACTOM's Static Power business in response to market demand to replace the traditional customised AC/DC panels, which are not easily modified.

The modular 19" racks have back plate connections that can easily be installed into 19" swing frame AC/DC distribution panels.

This new product, developed since early-2020, was introduced in mid-2021.

"In just short of a year, the modular AC and DC DB concept has gained widespread acceptance by major customers for use in substations. Several orders have been received to date in both the local and export markets and orders are increasing monthly as the market becomes more exposed to the concept," said **Tony Gordon**, Static Power's Manager, Technical Sales, and leader of the development team.

The AC and DC racks developed, have different functions.

The exciting new approach that Static has embarked on features, among many others, the following:

- In the AC rack portfolio, there are 3-phase dual AC chop-over racks, yard lighting racks with photocell sensor, and 3-phase and single phase AC distribution racks.

- In the DC rack portfolio there are emergency lighting racks, 50V dc/110V dc/220V dc distribution racks, DC/DC converter racks of all ranges (e.g. 110V dc to 48V dc), DC to AC inverter racks, and modular 24V dc, 48V dc, 110V dc and 220V dc switch-mode battery charger racks of varying power ratings.

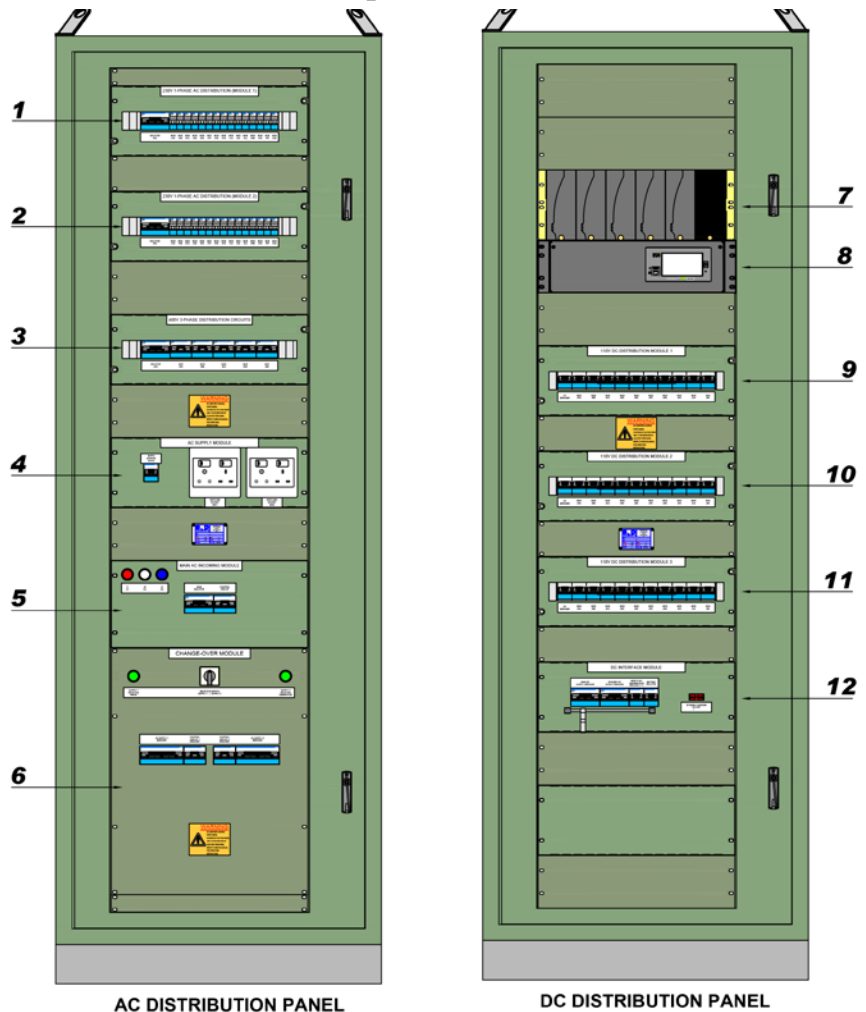
- AC modular inverter racks which is from 48/110/220V DC to 230V AC

- DC power racks systems (modular switch-mode battery chargers), which can be easily integrated into existing substation AC/DC swing-frame cabinets.

- Interface racks to allow easy connection to modular UPS and switch-mode battery charger racks are also available.

"The modular rack system approach has enormous advantages over the traditional customised product," Tony pointed out.

"Not only is the cost of production much lower as the racks are standard, but speed of manufacture and assembly is faster than the traditional



**Examples of modular AC and DC panels offered by Static Power. 1) 230VAC 1 $\phi$  distribution module 1, 2) 230VAC 1 $\phi$  distribution module 2, 3) 400VAC 3 $\phi$  distribution module, 4) AC supply module, 5) AC main incoming module, 6) Dual AC chop over module, 7) 110VDC 40A Rectifier, 8) Controller, 9) 110V DC distribution module 1, 10) 10V DC distribution module 2, 11) 10V DC distribution module 3, 12) DC interface Module.**

AC or DC distribution panel concept. The greatest advantage of the modular rack design is that the expansion of a modular 19" distribution board is very simple, by removing blanking plates and inserting a rack."

"This allows customers to expand existing distribution panels at site when there are changing needs. This is in sharp contrast to the inflexibility that characterised the traditional distribution board system, where panels were fixed and unchangeable and therefore had to be replaced entirely by a new one whenever a customer's requirements changed, so adding to the cost."

All the modular panels are of standard 19" design and are designed to fit onto a swing-door cabinet. This allows easy access to the terminations of each rack's back plates, which are mounted inside the cabinets.

"The distribution panels are either

32U or 47U in height.

A typical DC panel, can have a 48/110/220V DC switch-mode battery charger system, including AC-DC interface module, emergency light module, several DC distribution modules, as well as 48/110/220V DC input to 230V AC sine wave inverter included.

A typical AC panel can have a dual 3-phase AC input rack, 3-phase and single-phase AC output racks, 3-phase external AC plugs as well as single-phase AC plug tops that can be used by personnel inside the substation.

In some cases the AC input and distribution can be accommodated with the DC requirements, thus saving space in smaller substations.

"There are up to 10 off AC modules designs and 15 off DC racks available. This should provide the customer with an array of potential functions required at a substation," Tony concluded.



## Key appointments

**Jaco Theunissen** has been appointed Group Legal and Company Secretary with effect from May 1, 2022.

**Sy Gourrah** has been appointed Senior General Manager of the ACTOM Smart Technologies division with effect from April 1, 2022.

**Lee Mbenge** has been appointed General Manager of Distribution Transformers with effect from January 1, 2022.

**Benedicta Tshunga** has been appointed Payroll Supervisor for the Engineering Projects & Contracts division with effect from May 1, 2022.

**Nqobile Mthembu** has been appointed Business Development Manager of ACTOM Signalling with effect from April 4, 2022.

**Shuveer Maharaj** has been appointed General Manager of LH Marthinusen's Transformer Division with effect from April 1, 2022.

**Johan Jordaan** has been appointed Technology Development Specialist at MV Switchgear with effect from January 24, 2022.

**Prishlin Achary** has been appointed Quality Manager at MV Switchgear with effect from November 1, 2021.

**Piet Mokgotho** has been appointed Technical & Quality Specialist at Genlux Lighting with effect from January 13, 2020.

**Lindiwe Vuso** has been appointed Internal Sales & Tendering Administrator at Genlux Lighting with effect from April 11, 2022.

**Siya Nxopo** has been appointed Sales Specialist at Genlux Lighting's Gqeberha Branch with effect from May 1, 2022.

**Aubrey Meyer** has been appointed Workshop Foreman at Namibia Armature Rewinders (NAR) in Walvis Bay with effect from September 1, 2021.

**Martin Grewar** has been appointed Satchwell's Sales Representative for Bloemfontein, Northern Cape & Lesotho with effect from May 3, 2022.

**Marge Hendricks** has been appointed Satchwell's Product Manager, Special Elements with effect from November 1, 2021.

**Garth Goedeman** has been appointed Senior Financial Accountant: Finance & Administration at John Thompson with effect from October 1, 2021.

**Kim Manthey** has been appointed Finance Manager at John Thompson's Boiler & Environmental unit with effect from April 1, 2022.

**Denise Claassene** has been appointed John Thompson's Learning & Development Specialist: Human Resources with effect from June 1, 2021.

**Francois Londt** has been appointed Manager of Projects : Industrial Watertube Boilers at John Thompson with effect from December 1, 2021.

**Carel Visser** has been appointed Contracts Manager: Package Boilers at John Thompson with effect from August 16, 2021.

**Armand van Dyk** has been appointed Regional Manager of John Thompson's Package Boilers' Field Service Department with effect from September 1, 2021.



Jaco Theunissen



Sy Gourrah



Lee Mbenge



Benedicta Tshunga



Nqobile Mthembu



Shuveer Maharaj



Johan Jordaan



Prishlin Achary



Piet Mokgotho



Lindiwe Vuso



Siya Nxopo



Aubrey Meyer



Martin Grewar



Marge Hendricks



Garth Goedeman



Kim Manthey



Denise Claassene



Francois Londt



Carel Visser



Armand van Dyk

## Pilot 'YES' training programme proves a winner for John Thompson and trainees alike

Early last year John Thompson rolled out their first ever YES (Youth Employment Service) training programme. The aim was to take unemployed youth and to provide them with on-the-job training.

To further these trainees' chances

of employability, John Thompson placed the learners onto a Level 4 project management learnership through an accredited training provider. Project management is an important skill for employees to have, regardless of the role that they hold.

The YES programme opportunity was advertised nationally, with those applicants who met the requirements being shortlisted and interviewed and we ultimately placed six trainees onto the programme.

These learners had the opportunity not only to receive a national certificate in project management but to gain experience in either dispatch, operations management, industrial engineering or projects.

Two of the trainees were employed on a full-time basis at the end of the course. Matthews Dipudi has been hired as a Junior Project Engineer in the Air Pollution Control business unit in Johannesburg and Krinolen Naidoo has been hired as a Junior Proposals Engineer in the Industrial Watertube business unit in Durban.

It is unfortunate that we were not able to employ all the trainees on a full-time basis. We hope that the other four will find fulltime employment with the skills and experience they have gained in the 12 months with John Thompson.

"We intend to run another YES programme this year and hope to create a platform for youth to gain skills that will create a lifetime of opportunities," said **Denise Claassene**, John Thompson's Learning & Development Specialist, who project-managed the pilot programme.



Eben van Heerden, Air Pollution Control's Project Manager, is shown above explaining to Mathews Dipudi the planning, execution and installation of various types of dust-control and gas-cleaning equipment the business unit has on offer to industry.

## Distribution Transformers and Signalling long-service awards for 2021

Due to the risk of infection posed by the highly transmissible Omicron variant of COVID-19 that reached its height at the end of 2021, Distribution Transformers management decided against holding its customary long-service awards presentation ceremonies on that occasion, but instead arranged to deliver certificates to all recipients individually.

Normally the division has two presentation events on account of the large number of recipients involved each year. A total of 77 employees received long-service award certificates at the end of last year for service periods ranging from 10 to 25 years. In addition, three employees who retired last year received vouchers.

Two employees at Signalling were presented with long-service awards at the end of last year, as the picture

on the right shows. They are (left) **Leone Moonsamy**, Creditors Clerk, and **Hilary Castle-Hartnick**, Design Manager, who were presented with certificates for 10 and 20 years' service respectively by **Peter Colborne**, Signalling's General Manager.

Four employees at Distribution Transformers were recipients of awards for 25 years' service. They were **Lawrence Buthelezi**, **Ephraim Dlamini**, **Malatjie Takalo** and **Arthur Williams**.

The other long service awards recipients, for 15 and 10 years, are listed below. The three retirees were **Lucas Mabena**, Purchasing Manager, who had 30 years' service, **Dumazi Maswanganyi**, Grinder, 14 years, and **Richard Vongwa**, Tanker, 11 years.

**15 years:** T Dube, G Dlamini, P Nhubunga, D Thela, M Magudulela, S Hlatshwayo, S Mfecane, M Tshotini,





S Madlala, V Khoza, M Ramalisa, O Moime, M Manyane, N Motsoeneng, P Duma, J Macucwa, L Sithole, N Gxako, N Mishasha, P Pisane, M Sibiya, J Mdlalose, T Mongwe, J Mabitsela, S Sekome, M Malamule, T Pangumso, J Ndabula, M Seetsi, D Mboweni, A Mdlokovane and L Nyilika.

**10 years:** K Mkhize, P Makgoba, D Khoza, STsotetsi, M Mphasha, V Zitha, H Johnson, G Motloung, D Mbatha, P Mbangula, R Mahlagane, T Qwasha, Z Chonco, B Mkhonza, K Ndhlovu, P Dhlamini, S Rahube, P Mooka, S Kroti, A Monyela, E Seiso, B Maluleke, M Lawuthi, B Ubisi, K Mutheiwana,

H Odendaal, T Khumalo, S Mabizela, L Mkwanazi, S Ngabaza, D Mokoena, P Sebothoma, M Mype, L Maesela, P Harmse, F Noge, L Ndebele, L Mbenge, T Nkosana S Zondo and A Mothiba.

## LH Marthinusen Denver sponsors warm clothing for learners at local primary school



LHM and school staff raise their arms in celebration with learners at John Mitchell Primary School in Jeppestown on Good Friday, when the visitors delivered much-needed warm winter clothing for the learners. The adults seen in the picture are (from left): Gwendolene Hankwebe, Social Worker; Julia Keela, Teacher; Nonhlanhla Ndlebe, LHM Junior Accountant; Charmaine Hall, LHM HR Manager; Themba Mkhali, LHM Driver; Kevin Knipe, LHM Financial Executive; Julia Harmer, Principal; Zandi Khumalo, LHM Financial Accountant; Bheki Mandlazi, LHM Procurement Executive; and Elias Mkwana, LHM Transport Manager.

**Early this year LH Marthinusen (LHM) in Denver, Johannesburg, reached out to a social worker who works at the nearby John Mitchell Primary School with the following offer: Is there anything further LHM can do for the group of disadvantaged learners under her care?**

Her response was: Are you willing to sponsor new warm clothes for the learners to protect them against the cold during the coming winter?

The social worker was already known to a number of senior people at LHM due to the division's involvement in a monthly feeding scheme that assists with supplying the school with lunch spreads for the same group of disadvantaged learners. LHM has been involved with the feeding scheme since 2020.

LHM's management had no hesitation in agreeing to the request and duly

arranged to purchase 25 dry macks and 50 pairs of grey long pants for the learners in this group at the school, who range in age from seven to 16.

On Easter Friday a small group of managers and employees drove to deliver the clothes – as well as lots of Easter eggs, of course! – to the school in Jeppestown, where they were welcomed by the Principal, **Julia Harmer**, some of the teachers and many of the learners.

"The dry macks are dual-purpose, as they provide warmth against the cold as well as protection from rain," explained **Moreka Gomez**, LHM's Financial Manager, who arranged the purchasing of the clothing.

### Staff's bumper collection for charity

By the end of last year LHM had accumulated a bumper crop of char-

ity donations from staff via its charity fund, whereby all members of staff who are willing to donate money out of their own pockets to the benefit of people who are less fortunate than themselves have small amounts deducted from their salaries/wages every month or week.

Usually the money is donated to a selected charity or other worthy cause on Mandela Day (July 18) each year.

"However, in the last two years, due to the social restrictions that were introduced to contain the spread of COVID-19, we didn't follow the normal pattern of celebrating Mandela Day in this way," said Moreka.

The money collected over the two years swelled to a handsome R39 000, which was split between three charitable organisations, SPCA Germiston, Kids Haven in Benoni and Meals on Wheels.

# ACTOM businesses

## POWER

John Thompson, Bellville: (021) 959-8400

John Thompson, Isando: (011) 392-0900

[www.johnthompson.co.za](http://www.johnthompson.co.za)

John Thompson is a leader in energy and environmental solutions through value engineering and innovation. We are firmly focussed on serving global and local markets and we offer the following products and services: design, engineering, manufacture, construction, repairs, maintenance, retrofit, installation and commissioning of industrial water-tube and packaged fire-tube boilers, and industrial air quality solutions including HVAC, bag filters, scrubbers and ESP systems. Our Boiler and Environmental business unit offers the following solutions for utility plants: maintenance, repairs and retrofit of utility plant boilers, ESP systems, FFP systems, mills, burners, ducting, HP piping and ancillary equipment - geared towards keeping large power plants operating optimally, as well as providing a plant and equipment hire solution for construction work.

John Thompson also provides outsourced steam via its Energy Management Solutions business unit. Our service further includes capacity and efficiency improvements to older boilers, supply of original equipment manufacturer (OEM) spares, reliability studies, metallurgical services and computational fluid design (CFD) modelling.

## ENGINEERING PROJECTS & CONTRACTS

Industry: (011) 430-8700

ACTOM Industry, the group's Mine winder experts with modern power electronic drive, control and switchgear technology, providing turnkey solutions worldwide for specialised industrial rotating drive and power applications in mining, metals, paper and process industries. We manage projects from design to commission; inspect & maintain; provide emergency support; do repairs and we perform magnetic rope testing.

Contracting: (011) 430-8700

Contracting is the electrical and instrumentation business unit which provides turnkey solutions for electrical power and instrument & control systems in the mining and manufacturing industries as well as the public sectors.

Power Systems: (011) 430-8700

ACTOM Power Systems, the group's substation construction contractor, is ACTOM's systems integrator, responsible for turnkey projects for the electrical power, mining and manufacturing industries, as well as for public sector infrastructure. It specialises in Renewable balance of plant installations.

Transport: (011) 871-6600

Transport has three trading units:

**ACTOM Signalling;** design, manufacture, install and maintain railway signalling equipment and turnkey systems.

**ACTOM Transport Equipment and Projects (TEP);** a contractor and supplier of rolling stock equipment, parts, maintenance and specialised depot machinery and test equipment.

**ARNOT Vibration Solutions (AVS);** suppliers of anti-vibration products and engineered solutions to a wide range of industries, including rolling stock.

ACTOM Energy: (021) 510-2550

ACTOM Energy is a solutions business and in collaboration with various divisions within the ACTOM Group, provides electrical automation, power automation, protection and control, remote condition monitoring and fluid technologies (motion controls, hydraulic and pneumatic) system integration services across all sectors.

LH Marthinusen - Coastal

Durban: (031) 205-7211

Africa's leading maintenance partner for rotating machines - servicing traction, power generation, mining, utilities, oil & gas and general industry.

## HIGH VOLTAGE EQUIPMENT

High Voltage Equipment: (011) 820-5111

High Voltage Equipment, is a designer, manufacturer, supplier and installer of high voltage equipment to power utilities, electricity generation, transmission and distribution industry, mining sector and contracting companies. Manufacturer of isolators, instrument transformers, outdoor circuit breakers and insulated phase busbars. Supplier of high voltage Gas Insulated Switchgear, Compact Hybrid Switchgear, surge arresters, substation and overhead line insulators. HVE specialises in the repairs, supply of spares and maintenance of high voltage equipment.

## MEDIUM VOLTAGE SWITCHGEAR

MV Switchgear: (011) 820-5111

[www.actomswitchgear.co.za](http://www.actomswitchgear.co.za)

Leading manufacturer and supplier of air-insulated (AIS) and gas-insulated (GIS) switchgear for use up to 36kV. The product range consists of indoor switchgear, containerized switchgear solutions, compact substations for renewable energy applications, minisubs, free-standing outdoor kiosk ring main units and bulk metering units. The division also specialises in the repair and maintenance of electrical networks.

WPI Power Solutions: (011) 820-5111

24 Hour Emergency Service: (082) 801-3171

WPI specialises in the repair, installation, retrofitting and maintenance of electrical networks via MV Switchgear's After Sales department and WPI regional branch network that is technically well equipped and strategically placed close to the customer base. The department offers 24/7 customer support for substations, MV and LV switchgear and associated products.

Current Electric: (011) 822-2300

Current Electric designs, manufactures and supplies medium voltage current and voltage transformers to switchgear manufacturers and repairers, electrical distributors and a diverse range of end-users locally and internationally.

## POWER TRANSFORMERS

Power Transformers: (011) 824-2810

Power Transformers designs, manufactures and supplies a wide range of power transformers from 2MVA to 315MVA up to 275kV to power utilities, renewables projects, electrical contractors, the mining sector, local authorities and industry locally and internationally.

## DISTRIBUTION TRANSFORMERS

Distribution Transformers: (011) 820-5111

Distribution Transformers designs, manufactures and supplies distribution transformers ranging from single phase 16kVA to three phase 7MVA up to 44kV, can be Single or Dual MV or LV and NECRT's up to 44kV to power utilities, the mining sector, local authorities and industry, and renewable applications locally and internationally.

## LH MARTHINUSEN

LH Marthinusen Johannesburg: (011) 615-6722

Cape Town: (021) 555-8600

[www.lhm.co.za](http://www.lhm.co.za)

LH Marthinusen repairs and refurbishes transformers, electric motors, alternators and industrial fans. Manufacture of electric motor components, insulation components and specialised transformers and motors. It also provides engineering services for its products to the mining, industrial and petrochemical sectors and local authorities, as well as for the export market.

## REID & MITCHELL

Reid & Mitchell: (011) 914-9600

[www.reidmitchell.co.za](http://www.reidmitchell.co.za)

Reid & Mitchell is a repairer and manufacturer of electrical equipment for open cast mining, steel, rail transportation and marine industries. Motors and generators for excavators, off-highway vehicles, locomotives, drilling and pumping applications. The division is also a specialist repairer of DC motors and generators, including rebuilds, rewinds and commutator manufacture.



## Electrical Machines: (011) 899-1111

Electrical Machines supplies medium and low voltage motors, starters, gearboxes and speed reducers to the mining, industrial, processing and utilities markets.

Large Motors designs and manufactures medium voltage motors that include its reputable customised large UNIBOX series and its high specification MS4 totally enclosed fan-cooled (TEFC) cast-iron motors.

Laminations & Tooling manufactures laminated components and tooling for the electric motor manufacturing and repair industries.

## Energy Namibia – Electrical Products: +264 (61) 423 150

Supplier of Electrical products throughout Namibia.

## Namibia Armature Rewinders (NAR): +264 (64) 220 352

Repairer of electrical machines, hydraulics, boilers, transformers and switchgear throughout Namibia

## MARTHINUSEN & COUTTS

Marthinusen & Coutts: (011) 607-1700

[www.mandc.co.za](http://www.mandc.co.za)

M&C repairs, maintains, services, and carries out specialised manufacture of HV, MV and LV, flameproof, DC and traction motors, transformers, generators, alternators and ancillary power generation equipment up to 373 MVA. M&C also provides a full range of 24/7 engineering on-site services and unique motor and generator management and maintenance solutions and programmes.

## ACTOM TURBO MACHINES

ACTOM Turbo Machines: (016) 971-1550

[www.actomturbomachines.co.za](http://www.actomturbomachines.co.za)

ACTOM Turbo Machines is a mechanical turbo-machinery and high-speed rotating equipment service provider, for manufacturing, maintenance, overhauls, repairs, installations and commissioning of all types of steam and gas turbines, compressors, blowers, pumps, fans, gearboxes, centrifuges, as well as general fabrication and machining.

## METALPLUS

Metalplus (011) 433-1880

[www.metalplus.co.za](http://www.metalplus.co.za)

Metalplus has earned a reputation over many years in the petrochemical, power generation, machine repair, mining, and rail & transport industries, for its reliability, accuracy and speedy turnaround times in performing mechanical repairs that include submerged arc micro-welding, machining and grinding. Further to our multitude of shaft and crank shaft repairs our products extend to new shaft manufacturing, casing welding and stitching, hard facing, component manufacturing and specialised welding repairs.

## ELECTRICAL EQUIPMENT

Electrical Products: (011) 878-3050

[www.actomep.co.za](http://www.actomep.co.za)

Electrical Products is ACTOM's trading and representation arm, with a national network of strategically located branches. The business unit supplies products produced by ACTOM divisions and other manufacturers, including cable, cable accessories, lighting equipment, heating and ventilation equipment, circuit breakers, distribution transformers, minisubs, protection and control equipment, electric motors, meters, fusegear and overhead line materials.

## Satchwell: (021) 863-2035

Satchwell manufactures and supplies domestic and industrial heating elements, temperature controls, refrigeration components, solar water heating components and appliance spares to the domestic appliance manufacturing industry and the chemical, mining and construction industries, among others.

## Genlux Lighting: (011) 825-3144

[www.genluxlighting.co.za](http://www.genluxlighting.co.za)

Genlux Lighting is a leading designer and manufacturer of luminaires for roadway lighting, floodlighting, outdoor commercial lighting and industrial applications. It produces a wide range of high quality products in both HID and LED technologies.

## ACTOM SMART TECHNOLOGIES

Protection & Control: (011) 820-5111

A market leader in the supply of protection, metering and low voltage solutions to the electrical industry. Our offering includes a comprehensive range of automation systems, protection relays, credit, smart and prepayment metering systems and hosted services as well as LV motor control centres and power DB's, variable speed drives (VSD's) and components and accessories.

## Static Power: (011) 397-5316

Static Power specialise in the design and manufacture of AC and DC standby equipment for the Industrial, telecomms, rail and renewable energy markets including thyristor type chargers, (Micro Process Controlled option), industrial batteries, power supplies, industrial UPS's, furnace control panels, power distribution boards and battery tripping units. All systems are designed and engineered to suit their purpose for both the local and export markets. We offer specialized technical training to enhance practical and theoretical knowledge of our products. After Sales division to support and maintain installed equipment in the field.

## COM 10: (011) 552-8368

COM10 is a local assembler and integrator of Alpha switchmode rectifiers, DC/DC Converters with sophisticated supervisory controllers, Lead Acid Batteries, stands, battery cubicles and power enclosures.

## Alkaline Batteries: (011) 397-5326

Alkaline Batteries is the South African distributor for ALCAD and SAFT nickel cadmium and Lithium Ion batteries as well as the Intelli Connect battery monitoring systems for the industrial, telecoms, rail and re-newable energy markets. The local assembly plant on the East Rand includes a collecting point for spent nickel cadmium batteries for recycling. Services offered include Installation and Commissioning, Battery Sizing, Testing, Investigations, Maintenance and Repairs, Maintenance and Service Contracts, Discharge Tests and Training.

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