

MODERN

JULY - AUGUST 2014

QUARRYING

Official magazine of the Institute of Quarrying Southern Africa

www.crown.co.za



IN THIS ISSUE

De Kop – lean and smart

Practical guide for blasters

Major challenges ahead for industry



**Barloworld
Power**



Wealth Unearthed

When you unearth coal, you help
keep economies working.

Swiss A103129 Coal

This is the kind of wealth AEL Mining Services is proud to help you unearth.
Advancing, constantly evolving and defining the future of explosives in the mining industry.

Tel: +27 11 606 0000
email: company.email@aetms.com
web: www.aelminingservices.com



Mining Services



12 DE KOP – A LEAN AND SMART OPERATION

Afrimat's De Kop Quarry in Vredenburg, Western Cape, has improved its Aspasa ISHE audit score by more than 10% over the previous year. *MQ* visits quarry manager Alastair Govindasamy to find that there has been a distinctive change from production – to health and safety, and production. Production has picked up over the last year due mainly to the 91 MW West Coast One wind farm project currently being developed near Vredenburg.



16 PRACTICAL GUIDE FOR BLASTERS – PART II

Henry Terblanche has written this guide in a simple, easy to understand format. This month, he continues with the changing of bench marks and sinking new levels when required by the quarry development plan. He says blasters are not exposed to sinking new levels regularly, resulting in a lack of experience and knowledge to sink effectively and safely. The last section of this guide will be published in the November issue of *MQ*.



20 LOOK TO THE FUTURE URGES ASPASA

South African companies in the quarrying industry should consider investing in the growth of their business as world and local economies drag themselves out of a prolonged slump and edge towards improved growth. "With these improvements in place – all that is required now is the go-ahead from government and private sector to kick-start our building and construction industry," says Aspasa director Nico Pienaar.

AROUND THE INDUSTRY

- 4 PPC – a legacy builder of note
- 5 B&E's significant growth milestone
- 6 A centenary celebration for SKF SA
- 7 New readymix plant in Saldanha
- 9 Spray drying innovation wins award

PLANT and EQUIPMENT SOLUTIONS

- 38 FLSmidth grows equipment base
- 39 Unique approach to chute systems
- 41 New versatile screen on offer
- 41 LiuGong raises customer service standards
- 43 HPE gears up for WCape turnaround

28 QUARRYING SECTOR FACES SOME MAJOR CHALLENGES

Speaking at the recent IQSA conference, the Institute of Quarrying UK's executive director Phil James discusses the Institute's role in the sector, and the challenges it is facing. Not least among these the ageing workforce in the industry and the need to focus on preserving the skills and knowledge of these people, particularly as the world-wide economy – generally speaking – is improving.

44 LAST BLAST

Editor

Dale Kelly
dalek@crowns.co.za
Mobile: 0834199162

Advertising

Bennie Venter
benniev@crowns.co.za

Design & layout

Darryl James

Circulation

Karen Smith

Publisher

Jenny Warwick

The views expressed in this publication are not necessarily those of the publisher, the editor or the Institute of Quarrying Southern Africa.

Published quarterly by:

Crown Publications cc
P O Box 140
Bedfordview, 2008
Tel: +27 11 622 4770
Fax: +27 11 615 6108
www.crown.co.za

Average circulation
2 452

Printed by:
Tandym Cape



ON THE COVER

Although it is critical, reliable power supply does not have to be about onerous capital outlay. Barloworld Power, the southern African dealer for Cat Energy and Transportation (formerly known as Cat Power Systems), has seen a steady increase in the rental generator set business within the broader mining sector in recent years. The company has built up a loyal base of customers who rent generator sets on a regular basis. See story on page 10.

REDUCE MATERIAL HANDLING COSTS



At Pilot Crushtec thinking bigger and better
is our passionate pursuit

The EDGE Innovate range of specialised conveyors has the ability to increase the size and shape of stockpiles at a rate of up to 1600tph. Enhance your profitability by reducing your material handling costs.

This is the
POWER OF PILOT

PILOT CRUSHTEC™

CRUSHING AFRICA'S ROCK



Are we protecting the integrity of concrete?

The South African Readymix Association (SARMA) is placing sustainable readymix under the spotlight at its conference from 13-14 August at the Misty Hills Conference Centre. The conference is an annual institution among members of the readymix, cement and construction sectors, and judging by the calibre of the presenters and their papers, looks as if it will be a very good one indeed.

All of which brings me to thinking about the integrity of concrete. Is this really being defended in the country? The C&CI is no more. The Concrete Institute is doing a wonderful job in terms of providing education and training through its excellent school, and it acts as an independent body representative of the cement, concrete and broader construction industry. But are we, as an industry, doing enough to protect the integrity of concrete?

We all know about Lucky Cement, which is a major exporter to over 22 countries in South East Asia, the Middle East and the eastern coastal regions of Africa. I remember the joke going around at the time: 'If you're feeling Lucky and your building hasn't collapsed, it's OK!' If I recall, the C&CI estimated that some 1 400 t of cement from Lucky Cement was imported into South Africa in the first quarter of 2012, and sales of imported cement from this group were temporarily ceased at that time due mainly to accusations made by local producers about non-compliance with South African standards. The National Regulator took some serious criticism as well.

According to PPC's CEO Ketso Gordhan, some 1,1-million t of cement, accounting for 8,0% of the local cement market annually was imported into South Africa. Lucky Cement was the main player as it had the advantage of Chinese government subsidies and of not paying tax on exported cement. At that time, I wondered why in the lead-up to the 2010 Soccer World Cup when cement demand soared, did some of these local manufacturers import cement from the same companies they accused of flouting our standards?

But one digresses and clearly, we have to protect the integrity of our concrete. Putting aside the emotional aspect which includes job creation, etc, we need to focus on the technicalities where we say: Concrete is a very unique product with many variables going into its production in terms of water, cement, aggregate, sand, the production process, the weather, etc.

The manufacture of high-quality concrete at the proper consistency is a process that requires the right mix proportions of quality materials. To achieve this, batching plants have to be of a specific standard and regularly maintained.

Concrete is a product that has to survive for future generations. We can't afford another Tongaat disaster, or the one experienced in Lagos, or more recently, the Kariba Dam, which has developed serious structural damages, a mere 55 years after its construction. All of these issues tarnish the name of concrete. The National Regulator has to get its act together in terms of more stringent quality controls. The playing field must be levelled out for importers and the local industry to conform to the same set of rules and standards.

On the positive side, SARMA must be applauded for its role in promoting readymix as the construction material of choice. The Association represents reputable readymix companies, and its members are regularly audited against stringent standards based on SANS 878, ISO 9001-2000, OHSAS 18001 safety management and the ISO 14000 environmental management system.

Buying concrete from a reputable SARMA-accredited readymix supplier should be compared to taking out a good death benefit. We won't see the results, but future generations will!



Dale Kelly

*Proud readymix customer:
The writer recently did some
renovations to her home, utilising
readymix concrete from a
reputable supplier.*



PPC – a legacy builder of note

South Africa is currently experiencing a surge in infrastructure development projects, aimed at uplifting the lives of all South Africans. The latest, the De Hoop Dam project, which was opened on 24 March this year, will see a significant rise in potable and irrigation water to people living in the Limpopo and Mpumalanga provinces. The opening ceremony was attended by South African President Jacob Zuma.

The dam will be used for two primary purposes. The first is to supply water to the towns, industries and poorly serviced rural communities in Sekhukhune, Waterberg, and the Capricorn districts of the Limpopo Province. Secondly, the dam will supply water to the mines to help unlock vast mineral deposits mainly in the form of pgms found in the region.

"The dam will therefore be a catalyst for both social and economic development for this region," President Zuma says.

At 347-million m³, the De Hoop Dam, which used cement products supplied by PPC Ltd, was commissioned in 2007 and is one of the largest concrete dams in South Africa, costing in the region of R3,5-billion to complete. At completion, it utilised a staggering 94 963 t of cement.

"We are thrilled that the Department of Water Affairs chose our products to construct this much-needed infrastructure project," says Naseam Ismail, PPC Mpumalanga area manager. "We have



At completion the De Hoop Dam utilised a staggering 94 963 t of cement.

been a part of South Africa's infrastructure development for over 120 years and we plan to continue this for the foreseeable future."

The De Hoop Dam is the first project that forms part of the Presidential Infrastructure Coordinating Commission, which seeks to boost infrastructure development in the country and to stimulate economic growth and job creation.

The construction of the dam also signified several firsts for PPC and the construction of cement dams in the country. At the 2013 Fulton Awards, the project earned the Civil Engineering Structure and Sustainable Concrete award. The work done led to significant simplification of the construction process and allowed one of the highest construction rates achieved in South Africa, with a peak of more than 130 000 m³ of RCC placed in one month.

Call for collaboration

South Africa is currently seeing a call for collaboration, which will boost infrastructure development. During his 2014 State of the Nation Address, President Zuma reiterated the call for government, business and labour to work together to come up with joint solutions to grow the economy. "We have to work together as government, business and labour to grow our economy at rates that are above 5,0% to be able to create the jobs we need," he says.

"The willingness of the private sector to engage with government around speeding up infrastructure delivery is very clear, and there are many initiatives," adds PPC CEO Khetso Gordhan. "The business leadership of South Africa has created a working group that is interacting with government. Everybody is very excited; it is clear that everybody needs a new way of infrastructure delivery."

www.ppc.co.za



At 347-million m³, the De Hoop Dam is one of the largest concrete dams in South Africa, costing in the region of R3,5-billion to complete.

Electra Mining gears up for September

The South African mining industry will take the spotlight at this year's Electra Mining Africa, from 15-19 September at the Expo Centre, Nasrec, Johannesburg. As Africa's premier mining, industrial, electrical and machine tools show, Electra Mining Africa has a proven record for being a strong catalyst for new investment opportunities with billions of rands worth of equipment being showcased.

With increased floor space to accommodate the growing demand from exhibitors, this year's show will have a world-class

line up offering visitors the opportunity to compare and plan future capital equipment purchases as well as to view the latest technology.

Conferences running alongside Electra Mining Africa include: SAIMM: Surface Mining and Naturally Metallurgy Conference; IIIC: International Infrastructure & Invest Convention; Spintelligent: Powering African Industry Conference; WIMSA: Women in Mining Workshop; and SAIMEchE: Exhibitor Product Showcase.

www.electramining.co.za

B&E achieves significant growth milestone

Processing specialist B&E International's appointment as the BOO contractor for the crushing, agglomeration and stacking plant for the 170 000 tpa Tschudi copper project in northern Namibia, represents a milestone in the company's strategic plan to build on its solid reputation as a contract crushing and mineral processing specialist, in order to position itself as a leading engineering project service provider.

The Tschudi contact, B&E International's first in the copper sector and its first installation on a greenfields site, is set to become the company's biggest engineering contract.

Tschudi will be an open pit, heap leach, solvent extraction, electrowinning project producing 99,99% pure copper cathodes on site. Awarded in the fourth quarter of 2013, B&E International's crushing, agglomeration and stacking contract involves primary, secondary and tertiary crushing, agglomeration and plant maintenance as well as operation of the heap leach stacking process. The crushing, agglomeration and stacking plant will process 2,1-million tpa of copper ore on a BOO basis at the mine.

The B&E International portion of the contact is currently in the design phase and the company will shortly initiate the manufacture of ancillary plant equipment. All major capex items have been specified and procurement finalised, with site establishment underway. The plant must be fully operational by the end of December 2014.

"About three years ago, we took a strategic decision to diversify our offering to the mining industry in Southern Africa to include



B&E International places a major focus on supporting its operations with high levels of responsiveness.

engineering, procurement, construction and management of mineral processing plant," explains Ken Basson, director responsible for the Plant & Engineering Division of B&E International. "We've amassed a vast pool of intellectual and mechanical resources that enable us to manage entire process solutions for our customers, from conception to commissioning and day-to-day operations, at very favourable rates in comparison to traditional project houses. Our competitive advantage lies in the fact that we've designed and operated plant for our own use for many years and this experience is incorporated into our design philosophy."

The company's MD Dewald Janse van Rensburg says the single-source approach to mineral processing is becoming a trend in the mining industry, "because it benefits clients by cutting through a lot of contractual complexity and ensures optimal efficiencies."

www.beinternational.co.za

STRATEGIC PARTNERS



Born and bred right here - Bell is Africa's very own global equipment supplier. With support from our strategic partners we deliver a full range of premium machines. All built tough for our harsh environment. All supported by Africa's most comprehensive network of people dedicated to your success.

Best of all, while you are creating infrastructure and jobs, so are we. Choose Bell as your equipment partner and enjoy the pride of knowing you're not just boosting your business but helping make Africa a better place too.

Tel: +27 (0)11 928 9700
E-mail: sales@bell.co.za
www.bellequipment.com

BELL
Strong Reliable Machines
Strong Reliable Support

Corrupt contractors are warned

Consulting Engineering South Africa (Cesa) is appalled by the pressure put on its members to certify payment for work not done and will not bow to pressure from greedy, unscrupulous and unqualified contractors and corrupt officials.

"We are concerned and as an organisation that represents this invaluable profession which is the backbone of quality infrastructure, we cannot accept this despicable behaviour and conduct to remain unchallenged," says Cesa CEO Lefadi Makibinyane. He cautions that Cesa will not allow these bad elements to hold the profession to ransom or deter its members from practising their profession. "Their actions are denying our people a better life through the delivery of basic services and critical infrastructure underpinning economic growth and job creation.

"Our government has done everything to prepare internationally-acclaimed policies but

implementation has been its Achilles Heel, mainly due to these unscrupulous officials who are eroding the profitability of, not only our member firms, but most companies doing business with government, especially municipalities, where the rot lies.

"In Cesa's space in the economy, we shall be relentless in holding those in power accountable to ensure that the quality of basic services is delivered to the people of South Africa. We shall work closely with government institutions to ensure that these corrupt acts are identified and their perpetrators report to the South African Police Services, the Public Prosecutor, the Special Investigative Unit and National Treasury, for further investigation and prosecution," Makibinyane adds.

www.cesa.co.za



SKF SA celebrates its centenary

Specialist supplier of bearing and engineering solutions to some 40 market sectors SKF South Africa is celebrating 100 years of excellence. The company has celebrated many highlights and important developments, both globally and locally over this period, starting off on April 12 1914, when SKF South Africa first opened as SKEFKO (South Africa) Ball

Bearing Company Limited, in Pritchard Street, Johannesburg.

Some highlights include the expansion of SKF's product offering with the introduction of the six global core technologies, (bearings and units, power transmission, seals, mechatronics, lubrication systems and mechanical and reliability engineering services). On the local front,

SKF opened the Bearing Remanufacturing Centre in Witfield in 2008 for the remanufacturing of large-sized bearings, and a year later, the Solutions Factory was established.

Today, the company's impressive countrywide distributor network which also includes Namibia, Botswana, Zimbabwe, Mozambique and Malawi, comprises authorised independent industrial distributors, lubrication, commercial vehicle and agricultural distributors. With further representation in Zambia, East Africa and North Africa, SKF delivers engineering, product and service solutions to customer doorsteps, across the African continent.

"A number of important contributing factors played a fundamental role in SKF's rich and successful history, and continue to do so," says SKF South Africa's MD Ian Cillié. "We would not be where we are today without our loyal customers, our dedicated distributor network and our committed SKF employees," he adds.

www.skf.co.za



SKF's first factory in Göteborg, Sweden, in 1907. SKF AB, founded in 1907, upholds the motto 'Equipping the world with knowledge'. Its expansion programme led to the establishment of subsidiaries outside Sweden, of which SKF South Africa was the first on the African continent (photograph courtesy SKF).

ATLAS COPCO CHAIN FEED FOR DURABLE OPERATION

The chain feed is implemented as a standard on the ROC L series, T50, D50, D55 and D65 machines in all configurations. In order to provide the most durable operation for feeds we have made available an upgrade kit to convert the rope style feed into the chain type of feeds. This offers key benefits of longer service intervals, lower operating costs, increased machine availability, an upgrade kit and a decreased part consumption for increased environmental friendliness.

www.atlascopco.co.za

Sustainable Productivity

Atlas Copco

New readymix plant in Saldanha



Maintaining a presence close to its burgeoning customer base has driven AfriSam to establish a readymix plant in Saldanha Bay's Industrial Development Zone. The plant has a maximum capacity of 70 m³/hour.

Maintaining a presence close to its burgeoning customer base has led AfriSam to establish a readymix plant in Saldanha Bay's Industrial Development Zone. Fully operational in June this year, the plant has a production capacity of 70 m³/hour.

Bevin Cornelius, AfriSam's building construction materials territory manager in the Cape, explains that the plant will service the entire Saldanha Bay municipal area, including St Helena, Saldanha Bay, Langebaan, Paternoster, Jacobsbaai, Vredenburg and Hopefield. "We selected the site at Saldanha's Industrial Development Zone due to its close proximity to the upcoming projects within the central hub of the Saldanha Bay municipal area."

He says the company has planned for some time to increase its footprint in the region and was encouraged by the announcement of the upcoming contracts to build the Langebaan Hospital, the further extensive development of Saldanha's Industrial Development Zone (IDZ) and the widening of the port at Saldanha Bay.

The enormous project, which should lead to the integrated development of the Saldanha Port, the Saldanha Industrial Development Zone (IDZ), Saldanha Municipality and the Saldanha-Langebaan Coastal and Nature areas on the West Coast of South Africa, will require extensive investments in port development, IDZ facilities, industry establishment and expansions. It is forecast that there will be employment growth of approximately 10 000 jobs in the initial development phase and up to 40 000 jobs when the industrial zone and port are fully developed.

"Not only will each of these projects require large amounts of readymix product, but they will also prompt the increased development of infrastructure to support these projects. These would typically include roads,

schools, clinics, sewage systems and housing, which in turn will also require readymix concrete," says Cornelius.

AfriSam's Saldanha Bay readymix facility will comprise offices, storage silos for cement and storage areas for other aggregates, as well as delivery and dispatch areas to accommodate the company's readymix delivery trucks.

Cornelius explains that although the official working hours of the facility are weekdays from 07h00 to 17h00, the company is cognisant of the fact that deliveries may be required on weekends. "We are flexible to the needs of our customers and aim to accommodate them wherever possible."

He adds that the feedback received from the community to date is very positive. "Local readymix consumers welcome the entry of another readymix supplier in the area, and AfriSam looks forward to bringing to the area its recognised quality products and superior services."

www.afrisam.co.za

New MD for Bobcat SA

Les Lothian has joined the Goscor Group as MD of Bobcat South Africa (Pty) Ltd. He brings a solid pedigree and a wealth of experience in the construction and mining equipment industries to the table.

Bobcat South Africa has been a leading supplier of an internationally acclaimed range of compact machines to the mining, construction and agricultural market sectors in South and Southern Africa for some three decades. Bobcat Equipment SA (Pty) Ltd and Bobcat Equipment Rental SA (Pty) Ltd were acquired by Goscor in 2012 and is part of the Goscor Group of Companies and Imperial.

www.bobcatsa.co.za

For
**Quarrying
Explosives
and
Expertise
think
BME**



**BME provides
world class**
• **Blasting Products**
• **Technical Services**
• **Equipment**
• **Software**
**to over 16
African countries**



30 YEARS
of mining



A PERFECTLY BALANCED SOLUTION

Keep it Real. Keep it Cat®

Metso portable plants allow you the use of various crushing and screening operations: from a single, stand alone unit to two-, three-, even four-stage complete plants providing several end-product fractions. The LT series complete plants can be easily adjusted to accurately suit your crushing application. You can choose feeding to crusher or feeding to screen options to meet your end-product requirements. Quick move and set-up times allow minimum loss of production. Combined with Cat machines and with the support and back up service of Barloworld Equipment and you have the perfect balanced solution to move more and make more.

LOWEST SUSTAINABLE COST PER TONNE

For more information contact your local Barloworld Equipment salesman or email: metso-mobile@barloworld-equipment.com



**Barloworld
Equipment**

© 2013 Caterpillar Inc. All Rights Reserved. CAT, CATERPILLAR, their respective logos, "Caterpillar yellow" and the POWER EDGE trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



Cheryl Kelly.

Spray drying innovation wins award

Continuous investment into research and development of explosive technology has proven successful in enhancing the mining and construction sectors, with innovative blasting equipment being developed to improve production output, enhance safety, cut costs and ensure top quality performance.

Acknowledged for her role in the research and development (R&D) of these innovations is Cheryl Kelly, group technical manager of Initiating Systems at AEL Mining Services (AEL), who recently won the prestigious Innovator of the Year award for significant improvements to the spray drying process and formulations at the AECI awards luncheon, hosted in Hyde Park.

Employed by AEL for 26 years, Kelly's spray drying initiative is a method of producing a dry powder from a liquid or slurry by rapidly drying with a hot gas. This is the preferred method of drying of many thermally-sensitive materials such as powders used for foods like milk powder and coffee and pharmaceuticals. "This patented technique is unique to AEL in order to make free-flowing pyrotechnic," explains Kelly.

"The company's focus over the last year was to optimise the pyrotechnic compositions – and in particular the binder and oxidiser selections and concentration. This was aimed at significantly improving the timing and reliability of the composition," she explains.

Kelly is supported by a team of scientists and technicians who all offer vast and varied backgrounds in physics, mechanical and chemical engineering, completed a full range of delay powders used for AEL's Shock Tube range used in blasting applications of narrow reef and surface markets.

She says her success has been in partnering with the correct third parties including local and international universities, as well as identifying the right people and partners with the necessary skill set to assist in solving technical issues that arise during the development process. "It is integral for the success of these innovations that the team maintains a firm grasp on the anticipated changes

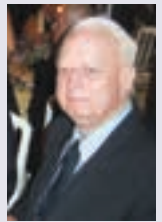
and developments in the world of explosives. I am very fortunate to have a team of extremely innovative and committed individuals who have demonstrated excellent product development and commercialisation skills."

AEL strongly believes that R&D is an integral component of the company's service offering and as a result, the company invests three percent of its annual revenue into the department in order to not only research new innovations, but offer field and technical support on all new and existing technologies.

"Working on new developments is tremendously exciting. Seeing an idea culminating into a saleable product is very rewarding on a personal and team level because there is incredible satisfaction in developing or enhancing products that are used to enhance bottom line business objectives for the various clients we serve," Kelly adds.

www.aelminingservices.com

Concrete roads legend passes away



Louis Marais, widely regarded as the pioneer of modern concrete paving in South Africa, passed away recently. He was inducted as an Honorary Member of the International Society for Concrete Pavements, a global organisation dedicated to the promotion of concrete pavements in January this year.

Delivering the eulogy at Marais' funeral in Roodepoort recently, The Concrete Institute MD Bryan Perrie said the passing of a man he regarded as his tutor, has deprived the world of "a giant in the field of concrete pavements – a legend in his lifetime." Perrie, who understudied Marais for a decade prior to his retirement, said Marais enjoyed the highest respect of all involved in the local and international concrete industry and made an immeasurable contribution to the acceptance and widespread application of concrete roads that now prevail in South Africa.

www.theconcreteinstitute.org.za

Global recognition for top solutions provider

Sustainable solutions company Atlas Copco has again been recognised as one of the world's most ethical companies by the Ethisphere Institute. Presented at the Global Ethics Summit in New York, the list includes companies that demonstrate leadership in areas such as ethics, corporate responsibility, sustainability and governance.

"We constantly train our employees to

think ethically and develop the business in a long-term sustainable way," confirms Håkan Osvald, senior VP General Council at Atlas Copco.

"We are convinced that not only is it good for business, but that it is the right thing to do," he says.

The company has also ranged Number Seven globally in the Newsweek Green Rankings.

www.atlascopco.com

Sustainable readymix in focus

The Southern Africa Readymix Association's (SARMA) annual conference is a major event for the readymix, cement and construction sectors, and this year's event, which takes place at the Misty Hills Conference Centre from 13-14 August, promises to be another highly successful conference.

With key speakers including Jason Drew, a well respected entrepreneur, passionate environmentalist and futurist, who will be focusing on sustainability and closing the circle in readymix; to David Bowerman, who has spent more than 30 years in the fields of readymix concrete, cement and construction chemicals, and

will be talking about admixtures and how they work; presentations will include out-of-the-box thinking on innovative new ways of producing readymix.

Carbon tax and its effect on the industry; readymix laboratories; women in readymix and affordable housing solutions are some of the very relevant presentations. A panel discussion on the integrity of concrete will also be held, together with an exhibition of new and innovative products and machinery. The conference will be followed by the Association's annual general meeting, which is open to all SARMA members.

www.sarma.co.za

POWER FOR RENT

Continuity of power supply is arguably the most critical factor in the life of a mine or quarry. Without power there can be no production.

Today, remote and not-so remote sites across Southern Africa are faced with non-existent or unreliable grid power.

Although it is critical, reliable power supply does not have to be about onerous capital outlay. This is a significant area in which there are applications for the rental of equipment in all phases of a mine's lifecycle from day one.

Barloworld Power Rental is often the option of choice when utility power solutions are needed for turnarounds and shut downs; for power and electrical distribution solutions when utility power is lost; for peak shaving applications to maintain production levels; to provide prime power support to maintain production during grid outages; for contingency planning preparation to minimise downtime in emergencies; and to provide early power prior to the installation of a permanent power plant.

Barloworld Power, the southern African dealer for Cat Energy and Transportation (formerly known as Cat Power Systems), has seen a steady increase in rental business within the broader mining sector in recent years. Solutions provided by Barloworld Power Rental that indicate the scope of demand range, from the Lesotho Highlands water

project, where a comprehensive rental solution was required to power all the construction and quarrying equipment, to the supply of prime rated generator sets to Aveng Mining for shaft sinking.

Rental products

Barloworld Power Rental operates as part of the Barloworld Power business in South Africa, Lesotho, Swaziland, Botswana, Namibia and Angola.

The rental fleet includes Olympian generator sets ranging from 15 KVA to 250 KVA trailer-mounted units, as well as Cat generator sets ranging from 275 KVA to 1 000 KVA skid-mounted units. Barloworld Power's entire fleet of rental generators is housed in sound attenuated weatherproof canopies. The units are fitted with engine controllers enabling synchronisation with one another or automatic transfer switch (ATS) panels enabling the detection of a failure from utilities and automatically starting the generator sets.

Lighting masts

The company also offers a comprehensive range of lighting masts for rental. These mine specification and heavy-duty civil lighting products are manufactured by Perth-based OEM AllightSykes. Rental customers have access to three different ranges of lighting masts, from the Combilite range for heavy construction and light mining environments,

Below: Three of the total five 400 KVA Cat generators supplied by Barloworld Power Rental to a Mpumalanga coal mine, together with two 1 000 KVA step-up transformers.

Centre: Three Cat C15 generator sets and an Olympian GEP220 genset, to supply power to the main processing plant at the Tormin Mineral Sands mine on the South African west coast.



through to the popular mid-range Mine Spec series and the Super Skid range for the most extensive mining environments.

Solutions

Barloworld Power Rental has supplied various customers in the quarrying, aggregate and open-pit mining sectors with larger rental generator sets ranging from 500 KVA to 1 000 KVA for, among others, power supply to crushing and processing plants and industrial water pumps, and to operate electrically-driven drag lines.

The scope of supply can include cabling, step up transformers and power distribution on site for any installation. Power Rental has a qualified team of rental technicians who look after its ever-expanding rental fleet both on- and off-site. Included in the rental cost is the availability of a 24/7 standby technician. A full-time technician can be based on site with the rental units if required.

Various rental options are available, including short and long-term rental, annual rental and ROP (rental with the option to purchase). ROP agreements enable customers to rent power supply units without the capital outlay associated with outright purchase. They can then exercise an option to purchase the units at the end of the contract period.

Among customers who have run back-up generator power supplied by Barloworld Power

in the form of rental units are Afrimat Aggregates, Ciolli Bros, Metso Mining and Construction, and Genet Minerals. The units supplied were either in a standby configuration in case of power failures or operated in a prime running application for individual production plants whilst utility power was being installed or repaired.

Barloworld Power Rental has built a very loyal base of customers who rent generator sets on a regular basis. "Barloworld has represented Caterpillar since 1927 and this long-term partnership gives every customer two distinct advantages: first, a superior product backed by significant R&D; and second, a customised power solution provided by a very capable knowledge base and support throughout the rental period," says Chereese Knouwds, Barloworld Power Rental manager. "This is what customers want in order to keep their businesses operational and risk free.

"We pride ourselves on the relationships we have built with our customers over the years," Knouwds adds. "Every member of staff understands the importance of customer retention and goes the extra mile to accommodate and assist our customers, with safety, uncompromising customer service and professionalism top of mind at all times."

*Front cover and story sponsored by Barloworld Power
www.barloworldpower.com*

Below: Barloworld Power offers rental lighting tower solutions such as this AllightSykes MS6K9 lighting tower, robustly designed for the toughest mining applications.





DE KOP – a lean and smart



Quarry manager Alastair Govindasamy.

Afrimat's De Kop Quarry in Vredenburg, Western Cape, has improved its Aspasa ISHE audit score by more than 10% over the previous year, demonstrating a consistent improvement, and achieving a score of 86,31%. Dale Kelly chats to quarry manager Alastair Govindasamy, about the improvements that have taken place since MQ's last visit in 2012.

De Kop quarry, which is part of Afrimat's Mining & Aggregates division, was acquired by Afrimat (then Prima) in 2005 as part of its strategy of growing its geographical footprint and product offering. The operation, which is relatively small in terms of the group's other operations, is an old quarry, yet still in the expansion phase.

The site is situated on 35 ha, and according to the original mine plan, the plan is to mine out about 8-million m³. "There are two phases, the first of which is a 20-year phase with the possibility of another 20 years," Govindasamy tells MQ. This would be by extending deeper into the floor.

Winning Aspasa's ISHE Best Improved Operation for 2013 award, along with SPH Kundalila Thabazimbi and Eskay Crushers recently, the proud quarry manager says that there has been

a distinctive mindset change from production, to health and safety together with production.

"As a group, we incentivise health and safety behaviour, and this has been a tremendous benefit for the quarry. Over the last four years, we had two unnecessary incidents, and we are now down to zero LTIs for the last year and a bit. I find that the workers report back to me on safety issues that they are concerned about, proving that they are taking responsibility for their actions and the actions of their fellow workers.

"We are at the stage now where we stress to our people that the plant is not started until their safety is in place. Previously when doing maintenance for example, a guard would be removed and not replaced before the plant was started and this has changed for the better," he confirms, adding that a major benefit is the complete support of Afrimat management and the group as a whole. "We have invested quite considerably in refurbishing our plant and getting our safety mechanisms into place, and I am now finding that visitors walking into the plant are noticing the changes, and are complimentary."

Proudly displaying his Aspasa 2013 ISHE award, Govindasamy says that since the 2012 audit, "we have worked hard at improving the plant. We have added a couple of new structures to increase production, but with safety in mind."

Govindasamy, who has lived on the West Coast



problem, and he would then tell me how to fix it. He was a qualified mechanic, so I quickly learned how to strip a motor. I am grateful to him, because through his laziness he enabled me to become something," he says with a smile. "I gained an invaluable insight into the business, and was a fast learner.

"At that time, I was not allowed a blasting license, but I did blasting and got involved in everything including carrying out my admin responsibilities. In about 1990 we went through a lot of changes with Murray & Stewart selling to Blue Circle. The last change we had was when the Darling & Hodgson group was sold to Murray & Roberts, and from there I went into readymix production and was appointed quarry foreman, and later quarry manager with responsibility for the concrete operation as well.

"Over the years, I thanked Murray & Roberts because they sent me on every possible course. I did a key management course in Vereeniging and for two years spent one day a week up there. I knew that this industry has got into my blood," he tells MQ.

Govindasamy finally left Lafarge after 29 years

Above: At the time of MQ's visit, De Kop was only producing sub-base.

Left: De Kop in Vredenburg on the West Coast, is an old quarry acquired by Afrimat in 2005.

operation

for some 40 years, started off his career in this industry at the Saldanha Quarry (now a Lafarge operation), which was then owned by Murray & Stewart, on May 5, 1976. His initial position was admin clerk, and as the company grew, he took over the administration completely. "I did everything in those days including manual bookkeeping, eventually realising that this was not for me; so I started getting involved in the operation itself.

"I had a manager who liked to take it easy, and would often send me out to look at the plant if problems arose. I would come back and relay the

Below: The surge stockpile comes through the tunnel onto the 4¼ crusher.





Above: Space is limited on site for stockpiling.

Centre: Rehabilitation on disturbed areas is impressive.

service, for a two-year 'sabbatical'. During his two-year break from quarrying, the keen golfer ran the Vredenburg Golf Club.

"However, in 2005, Prima (now Afrimat) announced that it was to purchase a quarry in Vredenburg and I attended the site and environmental impact meetings, taking up the post as quarry manager in 2007."

Govindasamy, who has been in the quarrying sector since 1976 has been involved with the Aspasa audits for all that time. Reminiscing about the 'old days', he says he misses the audits which usually involved about 12 attendees. "We always had several DMR inspectors and managers from other quarries, which helped to give us a new perspective. Within a company's quarries there was always competition. On the Prima/Afrimat side, I recall that not all the quarries were exposed to the audit, with the first two big audits held at Brewelskloof and Grabouw, and De Kop slowly being brought into line."

Asked about the value of the two Aspasa audits, he says they are a good yardstick in terms of keeping up with current legislation, and a great learning curve both from a company and a personal point of view. "They are a good indication for

me to see whether I am doing my job correctly, not only financially for the company, but also for the environment. After the ISHE audit in 2012, we went back to the drawing board, and improved on the factors that had lowered our score. It takes time," Govindasamy admits, "but we are getting there."

He is working at improving his results for the Aspasa About Face audit, which is held every two years. "We have rehabilitated some of the sections that have been disturbed and the vegetation has grown back exponentially. The DMR's environmental inspector was here earlier this year and was very pleased with what we had done."

On the walkabout, MQ could see that space is very limited in terms of stockpiling. However, the plant has been much improved in term of lifting some of it off the floor, with height restrictions a limiting factor in this regard. New machine guarding and walkways are clearly noticeable, and although two conveyors were pumping on my visit, dust control was excellent. There was a limited amount of spillage on the floor, clearly due to the fact that the area has experienced a fair amount of rain, and the wet material was sticking to the belt. The quarry is still in the expansion phase and is being rehabilitated on an ongoing basis. I could

Below: Walkways have been placed under the conveyors.

Below right: The focus on safety was clearly seen on MQ's walkabout.





see that the previously disturbed area down the slope had been replanted and looked very good indeed. Blasting is carried out by the group's blasting team as and when required. Blasts are recorded regularly for the two farms, which are some 1,5 km away from the quarry.

Products produced are all the base courses; 6,7 mm to 26 mm concrete stone and 6,7; 9,5; 13,2; and 19 mm roadstone. "We are fortunate in that we have a good polishing value on our stone, which is why we produce roadstone," Govindasamy says. Product testing is done at Afrimat's central laboratory in Worcester, and by a lab technician at De Kop who carries out a regular sieve analysis. Most of the plant maintenance is carried out on site with a monthly visit from the maintenance plant at Worcester to assist, where necessary.

With a total of 13 people, the operation is a lean but productive one. Mobile equipment consists of a 30 t loader, Bell excavator and two 20 t dumpers. In the plant, a 25/36 jaw crusher feeds into a 4¼ gyro. Added to this are a 36" gyro and a Barmac for the roadstone.

Govindasamy says last year was relatively quiet and he built up huge stockpiles, which although not particularly pleasing to the eye, have been a valuable asset. Production has picked up from last year, due mainly to the 91 MW West Coast One wind farm project currently being developed near Vredenburg on the West Coast. This green field project includes a cluster of up to 47 wind turbines. The project is set to displace some of the coal-powered generation in South Africa with wind power.

De Kop has supplied 87 000 t of sub-base for the wind farm over a period of three and a half months. "This has been a big order for us and we have worked extra production hours on holidays and over weekends. I haven't been able to play much golf this year," he says with a smile. "We should be finished about mid-August, and with only one more base to pour, the concrete works are

most done." (MQ noted on my return home that the Afrimat cement plant established at the entrance to St Helena is slowly being dismantled).

Govindasamy says the market is still slow on the West Coast, but is slowly picking up and the IDZ will give the area a huge boost in terms of job creation and lifting the economy. "We are also involved in roadworks in the area and are awaiting results of the tender for the rehabilitation of the MR 529 from Picketberg to Velddrif, which is a stretch of some 55 km."

The IDZ has the potential to create 15 000 jobs over the next ten years, generating R10-billion for the region's economy over the long term. The Western Cape has allocated R28,9-million in 2014/15; R29 155-million in 2015/16 and R30,270-million in 2016/17 to the Saldanha Bay IDZ initiative, to manage the planning and implementation of the project, as well as continue the roll-out of skills development within the local community. The 120 ha area, which was designated as an IDZ in October last year, is well situated to service the marine oil and gas markets within the African continent.

Discussing this further, Govindasamy says that if the IDZ brings in all the industry it is hoping for, the 15 000 jobs created will mean another 15 000 families in the region, which will be a huge catalyst for the economy. "I am positive about the future of the West Coast, and De Kop quarry is ready and waiting," he says.

*Report and photographs by
Dale Kelly*

Above: The quarry's closest neighbours are two farms situated about 1,5 km from site.

About Afrimat

JSE-listed Afrimat Limited is a leading black-empowered open-pit construction materials and industrial minerals provider. The company operates through five key divisions: Mining & Aggregates; Industrial Minerals; Contracting International; Concrete Products; and Readymix.

With a geographic footprint covering vast sections of urban and rural Southern Africa, the group's integrated product offering is distributed across the Western Cape, Eastern Cape, KwaZulu-Natal, Free State, Gauteng, Limpopo, Mpumalanga, Northern Cape and Namibia.

Afrimat was recently ranked 17th in the Financial Mail's Top 20 Companies of the Year survey for its performance in the previous year, as well as its future prospects and ability to offer investor value. The company was selected to this position out of a pool of some 400 listed companies.

www.afrimat.co.za

Practical guide for blasters – Part II

by Henry Terblanche



Henry Terblanche's Practical Guide for Blasters, is written in simple, easy to understand terms. This well respected quarryman has over 40 years experience in the opencast mining industry. In the previous issue of MQ, Henry Terblanche dealt with the duties of a blaster in some depth, also discussing the installation of benchmarks and drilling from a benchmark. In this issue, he continues with the changing of bench marks, and moves on to sinking a new level.

When having to change the benchmark due to uneven floors:

- Set the dumpy up on the old benchmark;
- transfer the benchmark to a new position where you can measure approximately 1,5 m up or down depending on the floor movement;
- transfer the old benchmark to the new position;
- measure a distance up or down depending on floor, and mark with a paint line;
- add or subtract this measurement from the old benchmark. The result of this calculation will be your new benchmark; and
- paint the result on the benchmark line.

Check holes for accuracy

In checking holes for accuracy:

- Set up the dumpy on the benchmark.
- Lower a weighted measuring tape into the hole until the weight strikes the bottom of the hole.

- Take up the slack on the tape.
- Take a reading on the tape with the dumpy. If the hole is drilled to the correct depth, the reading on the tape will correspond with the benchmark.
- Should there be a variance of more than 100 mm up or down, the hole must be either backfilled or drilled deeper.

Hole depth

When determining the hole depth using a benchmark:

- Set the dumpy up on the benchmark.
- Shoot a staff reading in a determined sequence on the collar of each hole and log onto a blast sheet.
- Deduct the staff reading of each hole from the benchmark. The result of this calculation will be your hole depth.

Surveyed elevations

When determining a benchmark using surveyed elevations:

- Identify surveyed elevation on level above and level below face to be

drilled, and mark with a paint line.

- Deduct the bottom elevation from the top elevation to give you the face height.
- Set up the dumpy and shoot a staff reading on the surveyed elevation.
- Add the staff reading to your calculated face height and the required overdrill. The result of this calculation will be your benchmark for drilling.
- Transfer the benchmark onto an adjacent face and mark with a paint line. Paint the benchmark above the paint line.

Establishing face height

When establishing the face height by using a measuring tape:

- Measure a horizontal offset distance from the toe of the face, and mark the spot.
- Measure the back break on the crest of the face using a plumb-bob or measuring back from a baseline off the previous blast, and mark.
- Measure the distance between these two marks.
- Add the over break measured distance to the offset measured distance.
- You now have a triangle from which you can calculate the face height with the theory of Pythagoras.

Sinking a new level

This section deals with sinking a new level when required by the quarry development plan. Blasters are not exposed to sinking new levels regularly, resulting in a lack of experience and knowledge to sink effectively and safely. It will include drilling, blasting, blast design, timing of the blast, loading sequence and pump movement for maximum efficiency.

Table 1: Change benchmark due to uneven floors.

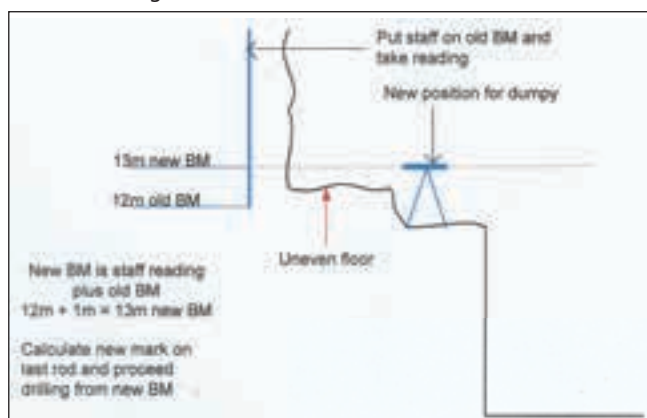
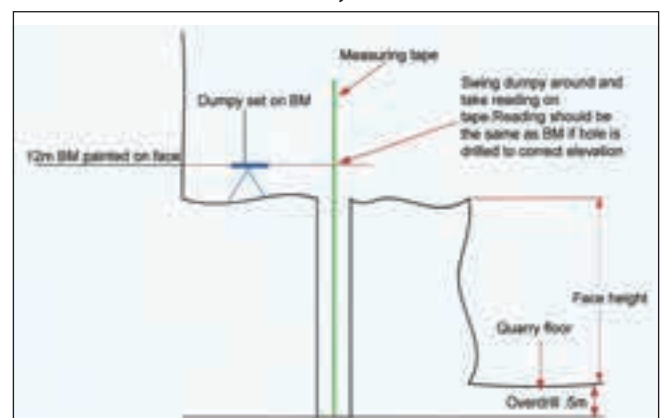


Table 2: Check holes for accuracy.



As sinking a new level to a production level is expensive and slow, it is important to get the sinking level to the correct depth in the shortest possible time. Weather and rain plays a major role in the sinking of new levels, as it can flood regularly, slowing down the process. Ground water seeping through continuously will also complicate the sinking.

Sinking a new level depends on the following:

- The position of the first cut.
- The starting position and direction of the initial sinking ramp will depend on whether it is an extension of an existing ramp or a new ramp altogether.
- Will there be groundwater seepage, and how much?
- The position of the permanent ramp system. See how it will fit in with the short to medium-term mining plan.
- The gradient of the ramp. A safe gradient for haul roads is 1:12 depending on the type of haul fleet and the distance available to sink to the required depth.
- The final face height. It is difficult to control hole deflection, floor conditions and back break on a face higher than 10 m. The final face height also depends on the size of your load and haul fleet. Geology is a major consideration when deciding on a final face height as it affects safety and slope stability.
- The design of the blast. A boxcut works best when there is no free-face to break to as per the blast design in Table 7.
- The selection of pumps. I have found that a submersible pump is more suitable to sinking than a centrifugal pump on a raft. It is a good idea to pump with a smaller submersible pump from the sinking cut to a centrifugal pump at a permanent pump station somewhere on the level above.

First cut position

The first cut must be started in an area where the floor elevation is a bit higher than the surrounding floor elevation, to keep the drilling area dry. Therefore, the first cut cannot always be started in the correct position. Once a depth is reached where the surrounding area can be dewatered, the cut can then be developed and mined towards the correct position. Drilling in water will cause backwash of fines into the hole resulting in the rod string getting stuck continually, and blocked holes. It is also very difficult to find and charge holes where the collar of the hole is underwater.

When designing the first cut of a new level, it is advisable to reduce your burden and spacing significantly as most of the time there will be no free face to break out to. It is also very important that your first cut breaks out to the correct depth first time round, as it is extremely difficult to redrill and blast to the correct depth.

- Mark the pattern of the first cut as per design in Table 6 and Table 7
- Drill and blast the first cut as per blast design in Table 6 and Table 7.

Loading out the blast

If water seepage and groundwater is not a problem, then the sinking of a new level is much simpler and you can immediately start loading out on the designed gradient.

If water seepage and groundwater is a problem, then loading out must start as soon as possible after the blast, before too much water has seeped in. This will give you enough time to dig a sump for the pump to be installed in position No. 1. You need to follow

Table 3: To determine hole depth to be drilled using benchmark and dumpy.

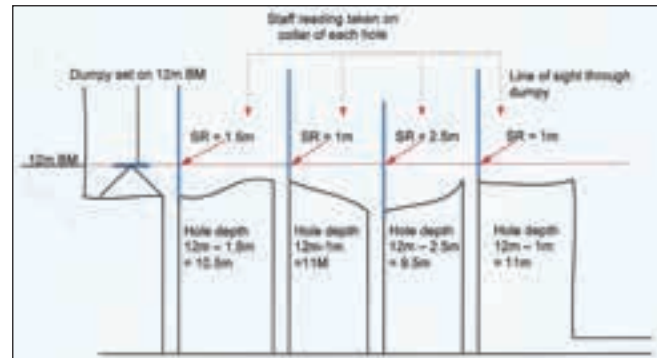


Table 4: Installing a benchmark using surveyed elevations.

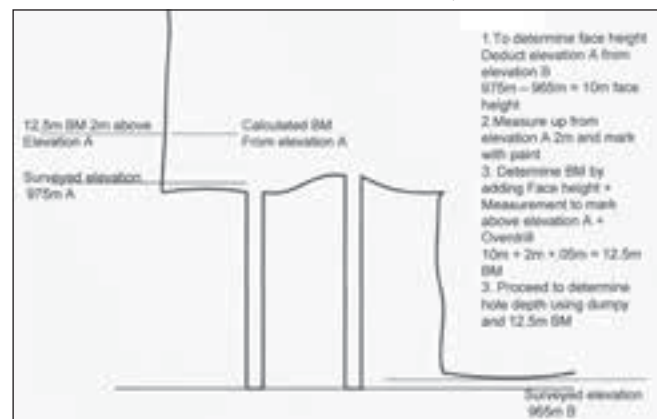
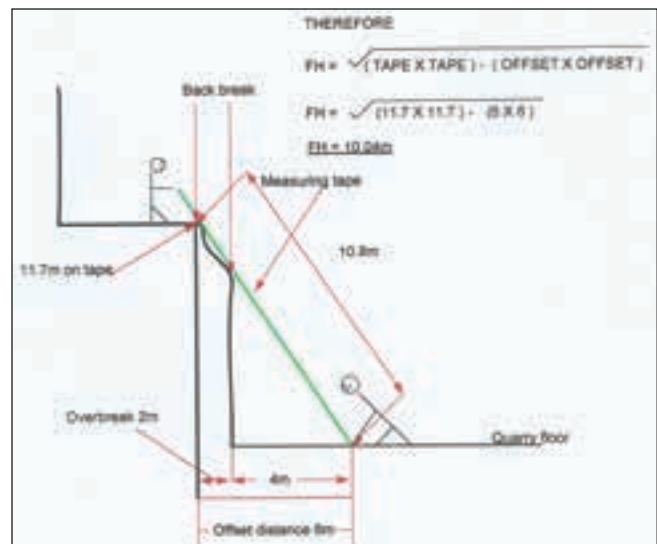


Table 5: Establish face height with a tape measure.



the sequence of mining as set out below:

- Start loading at the beginning of the planned ramp going down with the designed gradient until you reach the top of the water (Table 7, Sequence 1).
- Level out and follow the water level up to a point where you can dig a sump and install a pump (Table 7, Sequence 2).
- Dig a hole as deep as the reach of the excavator or solid ground and install the pump (Table 7, Sequence 3).
- Move the excavator back to the position where the operator had to level out to follow the water level.

One Source

Uniting technology, products, services and people

FLSmidth is your One Source for crushing, grinding, classifying, thickening, clarifying, slurry handling, flotation, underground mining, pyroprocessing, material handling, automation, engineering, screens, centrifuges and complementary products, metallurgical testing and modernisation services. FLSmidth offers you a complete line of equipment and services with proven reliability and enhancing performance from the leading brand names of Krebs, WEMCO, EIMCO, Dorr-Oliver, Pneumapress, Moller, Vecor, ABON, RAHCO, Buffalo, Meshcape and Conveyor Engineering.

Screen Media is an ISO accredited Engineered Consumable Product (ECP) supplier to the Quarry, Industrial and Mining industries throughout Africa.

Contact us on: Tel: +27 (0)10 210 5000 • Fax: +27 (0)11 452 2545
E-mail: za-mesh-sales@flsmidth.com • www.flsmidth.com

Visit us
at the
Electra Mining
Expo
Hall 6
Stand no.
D16

FLSMIDTH

Table 6: New level first cut.

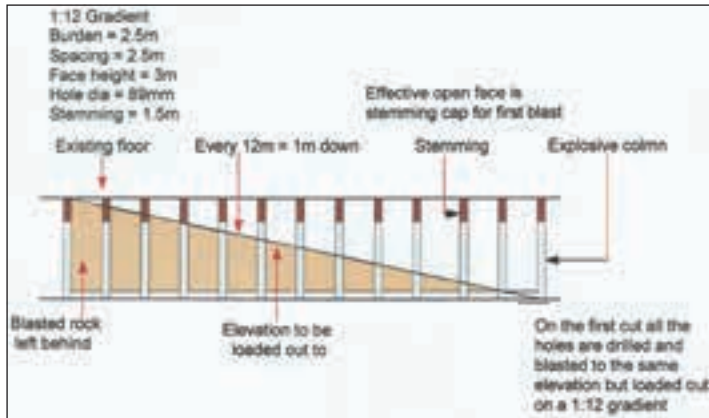
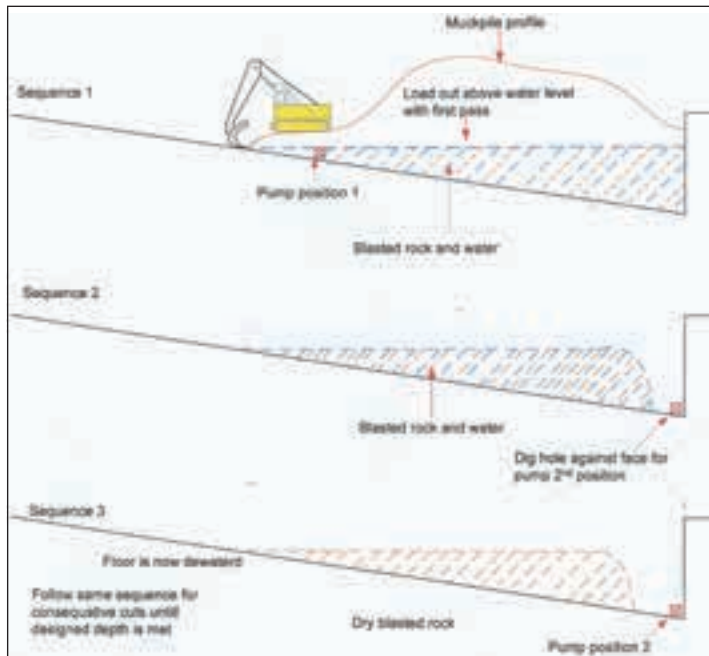


Table 7: Cut 2 load and pump sequence.



- Start loading on the designed gradient until the pump position is reached.
- Again level out at the pump and load out following the water level up to a position where you can again dig a sump for the pump. It is important to blind the load area with finer material as you progress forward to prevent tyre cuts as you will be hauling on shot rock.
- Repeat this sequence until the blast is loaded out completely.
- Drill and blast the second cut and repeat loading and pumping sequence until design depth is reached.

Loading in water can sometimes cause problems in the plant with blocked screens and chutes. Therefore it is a good idea not to over allocate haulers to the excavator that loads in the sinking cut or loading in water for any reason. This will give the excavator time between loads to dig wet material and stockpile it next to the loading area to allow excess water to drain out. This dryer material can then be loaded when the hauler returns for the next load.

The final Part III of this series in the next issue of *MQ*, will cover rehabilitation, looking at face wrecking, top soiling and composting, grassing and planting, alien removal and maintenance, water and weeding new plants, maintaining fire breaks and pathways, maintaining fences, wildlife, slope stability control, erosion control, and open days and communication. **MQ**

MMD Semi-Mobile Sizer Station relocated in modules by the MMD Transporter

MMD IPSC Green Mining Solutions

MMD remains at the forefront of In-Pit Sizing and Conveying (IPSC) technology, developing ground breaking sizing systems that optimize efficiency, improve safety, and deliver high productivity.

For over 30 years the MMD Twin Shaft Mineral Sizer™ and robust Apron Plate Feeder have provided a trusted and proven reliable core allowing MMD to provide innovative mobile and semi-mobile IPSC solutions.

Tel: +27 11 608 4801 **Email:** sizers@mmdafrica.co.za

THE MMD GROUP OF COMPANIES
WWW.MMDSIZERS.COM

Look to the future

South African companies in the quarrying industry should consider investing in the growth of their businesses as the world and local economies drag themselves out of a prolonged slump and edge towards improved growth. This is according to Aspasa director Nico Pienaar, who believes it is imperative that sand and aggregate mining operations are able to respond to increased future demands for construction materials.

"Government and the private sector have backlogs in terms of investment in physical infrastructure. With elections out of the way, governmental heads have received a fresh mandate and will want to be seen to be delivering on their campaign promises; likewise, businesses are seeing the first real green shoots of a revival in world economies which translates into increased demand for South African exports and commodities," Pienaar says.

"Statistically, history shows that

these macro indicators are followed by an upswing in the residential building industry which is followed shortly afterwards by the construction industry. This improvement is already in evidence and we are seeing vastly better sentiments in the residential sector already. With a new mandate, government can be expected to unleash some new infrastructure projects that should further stimulate the building and construction industry.

"For this reason we believe it is time for sand and aggregate producers to look to the future and put plans in place to deal with a higher growth scenario. Also, to look at the type and quality of minerals being produced and to actively market them to custodians of projects that are either in the pipeline or are being planned, such as municipalities, public works, construction firms and consulting engineers."

He adds that local statistics show that residential, non-residential and total building projects show healthy growth and that year-to-date figures are supporting the fact that 2014 building figures will be up from last year, upholding predictions that the industry has reached a turning point. Furthermore, stability in the political arena should bode well for the future.

"With the elections now over, we can hopefully return to the real issues and work with government and industry, to move towards world-class mining practices in order to produce world-class aggregates and building products. We need to work together to create legislation that formalises the industry, introduces stricter standards and puts a stop to illegal mining and unnecessary borrow pits.

"With a level playing field we will then be able to focus on the main issues facing



Aspasa director Nico Pienaar is urging aggregate and sand producers to prepare for the future.

the industry, such as improving the quality and selection of aggregates to enable our construction industry to have access to world-leading products and to enable new building methods. This will require investment in education and training of all levels of employees within our quarries and will require assistance from government (SETA) to properly align the process of education and training.

"Cooperation between quarrying and mining organisations, the government, as well as interested and affected people is currently reaping rewards for the industry and is ensuring the local economy remains buoyed-up with positive input from the mining sector – one of the most important contributors to our GDP," Pienaar states. "Despite labour unrest, changes to legislation, disagreement over allocation of new mining licences and other sticking points, the overall outlook for the industry remains positive. Cooperation between role players shows that the path is clear for mining to take place and for investment to continue to be directed towards the mining sector."

He says that mining in South Africa remains a lucrative business for companies that are prepared to play by the rules. "With these improvements in place, we are confident that the quarrying industry will be able to supply enough modern, good quality building materials to the country's construction and related industries. All that is required now is the will to change and the go ahead from government and the private sector to kick-start our building and construction industry."

Photographs by Dale Kelly



Legislation is needed to formalise the industry, introduce stricter standards and put a stop to illegal mining and unnecessary borrow pits.



It is time for sand and aggregate producers to look to the future and put plans in place to deal with a higher growth scenario.

Understanding the MHSA

Understanding legal interpretations of the country's Mine Health and Safety Act (MHSA) is critical for companies to avoid potentially costly litigation in the event of problems occurring at their mines in future. This is according to legal expert, Cecil Naude (right), of Townsend Naude Attorneys, who spoke at a specially-convened series of workshops held throughout the country recently to inform representatives about potential pitfalls and help them to implement better safeguards at their workplaces.



The workshops were organised by the Aggregate and Sand Producers Association of Southern Africa (Aspasa) to promote tighter compliance among the Association's membership, as well as to provide other industry role players with useful information to align their policies with the Act.

"It is important to realise that true compliance can only be proved when a company appears before the court. It therefore pays to take every possible action to create a safe working environment that conforms to all legal requirements and to regularly test compliance against stipulations of the Act," Naude explains.

He says the Act is a comprehensive one, but that it cannot be viewed as the only and definitive measure of compliance within the industry. In certain instances the Act can be viewed as not sufficient and in these instances it is advisable to read it in collaboration with the overall Occupations Health and Safety Act (OHS).

In addition, the MHSA contains both common and statutory laws that need to be considered when measuring compliance; whereafter common-sense law still remains a measure of liability in the event of an incident occurring at a mine. This means that no matter how confident a mine is of its compliance, it needs to make safety and health a part of every worker's daily duty to ensure they work safely and look out for the safety of others.

"In other words a worker's negligence that leads to an accident can mean that management or the owners can be prosecuted under the little-known law of vicarious liability. This means that in some instances a manager may be liable for an offence committed by an employee (or

contractor) if it can be shown that the subordinate was not well enough informed to avoid such incidents."

Naude says ignorance is no excuse. "In such an incident the State may prove negligence on behalf of the employer if training and guidelines were not provided to workers on site. On the other hand, the defence may argue that workers could reasonably foresee danger, or that workers should themselves have taken reasonable steps to avoid an incident. In these instances the court may choose to apply the objective test to determine if a reasonable person in the same position would have been able to identify and avoid the situation.

"Assuming all reasonable steps are taken to create a safe working environment, such as training, regular toolbox talks, etc, then it remains the responsibility of the workers and contractors to abide with company policy and work safely. That is why I advise clients to train, train and train staff again and again, because the more people below you are informed, the less chance you have of being liable," he stresses.

"Workers are by no means exempt of liability under the Act. Self-regulation is an important principal for employees to note and this means that everyone is responsible for their own safety, as well as the safety of others."

He adds that company management must drive health and safety and make it part of the everyday routine among all workers. "The CEO assumes ultimate



responsibility for all happenings on the mine and therefore is at most risk of liability in a case where blame is apportioned to the company.

"It is important to know that without derogating responsibilities or liability, the CEO may entrust any function to subordinates. However if any of the previously-mentioned conditions were not met then ultimate liability still rests with the CEO," Naude points out. "Likewise, managers are also in a position of trust and carry responsibilities. Provided they have the tools and training to fulfill the task then they are ultimately responsible and may also entrust functions to subordinates; but they likewise cannot derogate responsibilities or liability."

It is important that CEOs and company managers that are not 100% au fait with the MHSA take the time to study the Act and implement its requirements. "In this way they are ensuring the safety of everyone on site and they can avoid the possibility of being found liable (and incurring penalties that can include mine closure, fines or even a jail sentence), if individuals are found to be negligent and responsible for serious offences," he adds.

Mines and quarries that may have missed the workshop can contact Aspasa to arrange one-on-one workshops or convene a workshop in any area of the country if enough interest is shown on tel: (011) 791 3327.

IQSA's 45th anniversary – an auspicious event

The Institute of Quarrying Southern Africa's annual conference and exhibition held at the Lord Charles Hotel, Somerset West in April this year, coincided with two important events: the celebration of its 45th anniversary and the hosting of the Internal Presidents' Council annual general meeting, which was attended by Institute of Quarrying presidents from the UK, Australia, New Zealand, Hong Kong and Malaysia. The annual conference and exhibition incorporates Aspasa (Aggregate and Sand Producers Association of South Africa).

The conference started off with a warm welcome from industry stalwart Bryan Rookledge, who attended the first Presidents' Council Meeting in Dunedin, New Zealand in 1998. The International Presidents' Council's last visit to South Africa was in 2009 for the Institute's 40th annual conference and exhibition in Durban. This year is the first time ever that the annual conference was held in Cape Town.

Extending a welcome to the international presidents, their wives and some 250 conference delegates, outgoing IQSA chairman Glenn Johnson said it was an honour to host the international delegation. "I trust that you will enjoy your stay in our Mother City and truly experience all

that is proudly South African."

Presenting his annual report for the 2013/14 period, he said that in line with the global economic slowdown, South Africa has experienced a sluggish performance characterised by weakening consumer spending patterns throughout 2013. "The South African GDP for 2013 which declined to 1,9% from 2,5% in 2012 is expected to average 2,9% in 2014. Fixed investment continues to be driven by general government as well as public corporations, with R847-billion worth of infrastructure investment programmes budgeted for 2014/15. This is expected to stimulate aggregate demand."

Looking at the aggregate industry, Johnson said this is estimated to be



Outgoing IQSA chairman Glenn Johnson.

around 114-million tons, according to the Department of Mineral Resources and based on 2012/2013 returns and industry estimates. "This is an increase on the 89-million t previously reported and has seen aggregate demand volumes increase to that previously experienced in our peak of 2008. The formal sector's (licensed suppliers) market share is estimated at 53% against the backdrop of construction borrow pits and illegal operators, which now make up 57% of the total aggregate market."

Johnson attended the International Presidents' Council Meeting in Dunedin, New Zealand in July 2013, where key matters raised included the introduction of the New Member Grade – Technical Member Grade (TMIQ), and the Corporate Grade for the TMIQ. "Membership challenges being faced worldwide include the ageing membership demographics and the relevance of the Institute of Quarrying to younger generations, moving forward."

Discussing current membership in South Africa, he said this is at 350, which has been steady over the past year. An active recruitment drive is currently in progress to campaign for membership among all players in the quarrying industry.

The IQSA has partnered with XTract Training Services to assist in providing members with relevant training requirements. The industry's suppliers are continuing to supply specific training, which has been facilitated by the IQSA for its members.

Johnson pointed out that the IQSA is



The IQSA board of directors, **left front:** Lazarus Meko; Glenn Johnson; Terry Pop; Dennis Oosthuizen; and Deon Bosman. **Left back:** Piet Booysen; Felix Motsiri; Nico Pienaar; and Marcel Fynn. Not pictured are: Gert Coffee; Terry Gillham; and Stephen Marx.



Above: Oosthuizen presents Johnson with the outgoing chairman's badge.

Left: Investiture: New chairman Dennis Oosthuizen receives his chain of office from outgoing chairman Glenn Johnson.

Right: Aspasa chairman Gert Coffee.

a non-profit organisation which relies on funding generated from subscriptions, fundraising events, conferences and sponsorships for its continued existence. "Despite the downturn in the economy over recent times, the Institute continues to be well supported by both suppliers to and producing companies within the quarrying industry in South Africa, a matter we are extremely grateful for. In recognition of sponsorship beyond the ordinary, a special word of thanks needs to be extended to Osborn for its generous support to the Institute. Tom Kruger and his team have for some time sponsored the hosting of the Thursday conference dinner, and we extend a very big thank you for your continued support of this function."

Sponsors this year included: AEL Mining Services; Aspasa, Afrimat Aggregates Trading; AfriSam SA; B&E International; BME; Bell Equipment Company; Blasting & Excavating; Caldas Engineering; ELB Equipment; KLT Equipment & Machinery; Lafarge Industries SA; Liugong; Osborn Engineered Products; PPC; and Raumix.

"This brings to conclusion my two-year tenure as chairman of the IQSA. I would like to thank the members of the Institute, the board and my employer AfriSam South Africa for the opportunity. It has been an honour and a privilege to serve as chairman," Johnson said. "I would further like to thank the Institute and AfriSam South Africa for affording both my wife Michelle and I the opportunity to represent the IQSA at the International Presidents' Council meetings in Australia and New Zealand during this period."

He thanked the board members for their support and congratulated Dennis Oosthuizen on his appointment

as chairman. "I wish you all the success in your tenure and offer my continued support to both you and the Institute as a member of the board. Then, to the two unsung heroes of the IQSA, without whom the functioning of the Institute would be severely compromised – Terry Pop and Petro Potgieter – your dedication and application to the efficient running of this Institute is highly appreciated. To all our sponsors, suppliers and members whom, without their support, the continuation of the business of the IQSA would just not be possible, a very big thank you."

Extraordinary general meeting

It was resolved at the Extraordinary Meeting of the members of the Institute, that the Articles of Association and the Bye Laws be incorporated in the new Memorandum of Incorporation. The reasons for and the affect of the new Memorandum of Incorporation are to bring the Articles of Association and Bye Laws of the Institute into line with the new Companies Act 71 of 2008.

Aspasa chairman's report

Welcoming colleagues, guests and overseas visitors, Aspasa chairman Gert Coffee said Aspasa is privileged to participate in the conference under the flag of the Institute of Quarrying.

"Aspasa works with the IQSA to ensure that the whole industry is informed and stays up to speed with what is happening. Our role is to ensure the understanding of the need for aggregates to the general public. We also work hard on setting good standards for the industry and its loyal and supportive members. Through the audits, Aspasa tries to ensure legal compliance is adhered to by members.

"In the last year, Aspasa has worked hard to ensure members gain value by belonging to the Association," Coffee said. "At the end of 2013, the diesel rebate issue was pulled through and members can now again claim for the diesel they use. At this conference, the lawyer who carried out the hard work for Aspasa is presenting a paper in this regard. With the Pistorius court case being televised, the status of the legal profession has escalated in the minds of the public, so Aspasa salutes Freek van Rooyen for his work.

"The mining industry is not having a very good image in the media and with Aspasa's good relationship with the Chamber of Mines, the COO of the Chamber of Mines Roger Baxter, will put some facts on the table to correct some perceptions. He will share with us what the mining industry, which includes aggregates, sand, cement and lime, means to this country. We should therefore appreciate what industry bodies do when it comes to the representation of the industry.

"It is hoped that all attendees enjoy these few educational days with us here in the Mother City – where the gentleman's game of rugby once ruled, but that was long ago," he adds with a smile.

Keynote address

Well-known South African adventurer David Grier and his running partner Andrew Stuart, returned from Cuba in early January, after running more than 1 500 km from the south-eastern tip of the country to the north-western tip, in an attempt to raise money for the Cipla Foundation Miles for Smiles initiative. They were the first athletes to run the length of this Caribbean Island in a single attempt.



NP15
3 steps
forward

Nordberg NP15 impact crusher takes you 3 steps forward

Metso's new Nordberg NP15 impact crusher is designed for secondary and tertiary applications. Performance, profitability and maintenance of the crushing plant are at the heart of this new machine.

Discover more at www.metso.com/construction

BEE Ownership Compliant

metso.com – email: mmsa.info.za@metso.com





Above: Mogotes in the Vinales Valley, Cuba. **Left:** South African adventurer David Grier describes the many challenges experienced during his epic Cuban challenge.

The Cipla initiative assists the medical services organisation Operation Smile in creating awareness for the plight of children born with cleft lips and palates, as well as raises funds to perform corrective surgery on them.

Grier completed this gruelling journey in just 28 days after starting the adventure on 27 November 2013, with long-time running partner Andrew Stuart. The duo raised more than R250 000 for Cipla Miles for Smiles by running an average 50 km/day, which will now enable over 30 children to benefit from corrective facial surgery across the African continent in 2014. He chose Cuba for this adventure "because of the country's mysterious quality and its ability to capture people's imaginations".

Grier says this adventure was particularly challenging. "We were constantly running into trouble with the authorities on our quest, harassed, interrogated and threatened with deportation; then on the narrow, overgrown roads, had to dodge trucks and cars while running. We also had very limited access to water, places to sleep and food, and experienced soaring temperatures and extreme heat every day.

"We saw that while life in Cuba is dangerous, there is an acceptance and content among the people we encountered, as they have the ability to look past the harsh realities of daily life and appreciate what they have. Their attitude inspired us to push on during tough times to complete the journey."

Grier ran 52 km on Christmas Day, but faced the personal challenge of missing his family in South Africa during this time, as his daughter gave birth to his third grandchild during the festive period.

"We constantly reminded ourselves

that the journey is bigger than any one of us, and that it is about making the difference in someone else's life and creating awareness for the problem of cleft lips and palates."

His message to delegates was that we can't change on our own. He says that to-date, the project has enabled some 2 000 children to be operated on. "When a child comes out of surgery, we give them a mirror two hours later, and they stare and reflect and see what change has done to their little lives. I challenge all of you to find a quiet space somewhere in your lives and pick up the mirror of your life and reflect if there is some little way that you can change.

"But remember, it is so important

to realise the rewards in change. If you embrace change you have to see that it will hold something better for you in the future. And, remember in order to embrace change, you have to have the correct attitude. You have to see hope in the process. And last of all, remember that we can't change on our own – we need everyone around us to embrace change, and then together as a group, and a country, we can take ourselves forward and make this place a better world."

Conference programme

The international presidents presented 10-minute briefs on their various branches which included: UK president Colin Jenkins; Australian president John

New members

IQSA chairman Dennis Oosthuizen presented certificates to the following members:



Sandra Etchells.



Dakalo Mudau.



Pieter Nel.



Dr Andre Dougall.



Royden Webster.



Simon Tose received the IQSA's Best Paper Award for 2013, for his paper presented at last year's annual conference entitled: *Burning or Reactive Ground.*

ALWAYS INNOVATING RENTAL SOLUTIONS



Power outages are a serious threat to your business and community at this time of year. Along with our extensive range of generator sets, the Barloworld Power Rental team provides on-the-ground support to keep your business up and running. To maintain a normal life, count on the most trusted name in power.

Power Rental. Always innovating. It's how we're built.

BUILT FOR IT.

For more information call 0860 898 000 or visit www.barloworldpower.com



**Barloworld
Power**

CAT

© 2014 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, BUILT FOR IT™, and respective signs, "Caterpillar Yellow," the "Power Edge" trade dress as well as concepts and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



International delegation: back left: UK president Colin Jenkins; Australian president John Stanton; IQSA outgoing chairman Glenn Johnson; Hong Kong chairman David Hogan; New Zealand president Gordon Laing; and Malaysian president Chen Nyet Lin. **Front left:** Fiona Jenkins; Sue Stanton; Michelle Johnson; IQSA chairman Dennis Oosthuizen; Karen Laing; and Irene Puah San Keun.

Stanton; New Zealand president Gordon Laing; Hong Kong chairman David Hogan; and Malaysian president Mr Lee. (The


executive director of the UK Institute of Quarrying's presentation is carried in full on page 28 of this issue).

Papers presented on the first day of the conference included: Shepstone & Wylie attorney Freek van Rooyen – *Diesel Update*; Terex Finlay's Adrian Millar and Bell Equipment's Izak van Niekerk – *The Progression of Mobile Crushing and Screening*; AfriSam's Edwin Swanepoel – *Pump Selection: System Resistance Curve Calculations*; AEL's Simon Tose – *From Fire Setting to Electronics*; and ATK IT's Adrian Damant – *Digital Health and Safety*.


Day two's papers comprised: Keynote speaker Daniel Silke; Sarma's Johan van Wyk – *Materials Testing and Downstream Quality*; Lafarge's Nondumiso Radebe – *Redressing Past Imbalances through the Social Labour Plan*; Chamber of Mines CEO Roger Baxter – *Mining in South Africa*; Split Engineering's Edgar King – *Control of Aggregate Sizing using Visual Analysis*; and the Western Cape's Principal Inspector Louis Bezuidenhout – *Mine Health and Safety*.

All papers are available on the IQSA website:
www.iqsa.co.za.

Report and photographs by Dale Kelly




**Quality is the cornerstone
of our products**



Mining & Aggregates is a key division within Afrimat Limited producing aggregates of a wide variety of sizes and technical specifications, primarily with products including stone, gravel, crushed aggregate, laterite and sand mainly for large-scale civil engineering and infrastructure projects.

It also provides professional contracted drilling & blasting, transport & logistics crushing & screening and earthmoving & plant hire services.

Mining & Aggregates is located in seven of South Africa's provinces and in Namibia with commercial quarries including sand mines, gravel mines, mobile crushing, recycled concrete crushing plant and drilling & blasting.



Mining & Aggregates

Tel +27 21 917 8840	info@afrimat.co.za
Fax +27 21 914 1174	www.afrimat.co.za

Mining & Aggregates is part of Afrimat Limited, a leading black empowered open pit mining company.

QUARRYING INDUSTRY faces some major challenges



The Institute of Quarrying UK's executive director Phil James.

Below: Whatley Quarry is a limestone operation owned by Hanson plc, near the village of Whatley on the Mendip Hills, Somerset, UK (courtesy UK Institute of Quarrying).

A presentation of particular relevance to IQSA members was that of The Institute of Quarrying UK's dynamic executive director Phil James.

Speaking at the IQSA's last conference, he focused on the Institute's role in its sector, and how that might change in the future. He drew some conclusions about the industry at a global level and looked at key issues mentioned by the various international presidents.

"We are colleagues in a global industry that brings us together today to share ideas and to learn from each other," James says. "Presidents are extremely keen to ensure that the Institute is joined up across the world. This past year, we've held teleconferences so that presidents can discuss events and plans from the four corners of the globe and to try and work towards

adopting a global viewpoint for the Institute on key issues."

He points out that key issues facing the industry emerge as priorities when one considers what is happening across a number of territories.

"Why is the Institute here? What's our role, and what are the things that we're doing to try and address these global challenges?" James asks. "We've heard this



morning about how the economy in parts of the world is starting to recover, with volumes and production activity rising to meet the demands from growth in industrial development, led predominantly by construction, of course.

"Certainly in the UK and elsewhere across the world, the aggregates and mineral products industry has been pretty badly hit over the last few years. Output levels were down to something like those seen in the 1960s; but we now appear to be emerging from that recession with some good signs that growth will be sustainable in the future."

James says that despite this, planning restrictions are a real challenge. In the UK for example, despite recent outputs being at historically low levels, new planning permissions continue to fail to replace reserves extracted. Nationally, it is estimated that just 70% of sand and gravel production was replaced with new planning consents and this continues a trend that has occurred over many years. "It's a fact that there is more space allocated to supermarket car parks in the UK than quarries, and yet the broader construction materials industry returns £1,70 for every £1,00 pound invested.

"The issue of regulation and the role of regulators across the world is vitally important in ensuring that our industry is properly supported and recognised for the contribution it makes to the economy," James says. "This is illustrated here in Southern Africa of course, with the issue of illegal borrow pits and quarrying activity that – and forgive the pun – undermines the highly professional operations that are run by the legal operators. It is great to see Aspasa working hard on behalf of its members to try to get a level playing field that properly supports the professionalism of legitimate operators in minimising environmental impact and properly protecting the health, safety and welfare of the workforce.

"Over the last few years, we've also seen considerable further consolidation at a corporate level and a shift towards foreign ownership and control of businesses and the international expansion of global businesses into new territories. Globalisation is a trend that is seen right across the economy in all sorts of sectors and in life in general. So, there's much that we have in common as fellow



Cliffe Hill Quarry is the largest quarrying and asphalt operation in Midland Quarry Products (MQP). Based in Leicestershire, it is a working quarry with two asphalt plants on site and a rail link. While there have been quarrying operations since the 19th Century at Old Cliffe Hill Quarry Markfield, it was only in the late 1980s that the construction and commencement of operations at New Cliffe Hill Quarry began. Today Old and New Cliffe are linked by a 714 m tunnel, which was completed in 2003 (courtesy UK Institute of Quarrying).

professionals within this industry, wherever it is in the world that we happen to be operating."

Priorities

James says there is another set of issues that stand out as high priority challenges, and that is the challenges faced in respect of our people. "We have an ageing workforce. As a general statement, we do pretty well in terms of investing in our people and equipping them with the knowledge and skills to operate safely and productively.

"There's a wealth of talent within the industry, but we're all getting older and need to think about the sustainability of those skills, particularly as the worldwide economy, generally speaking, is improving and we're looking at a period of increasing pressure in raising production outputs. In the UK, recent estimates show that the average worker is in his mid-50s. I said 'his' deliberately – we do have an issue or at least a missed opportunity – when it comes to the diversity of our workforce as well.

"We need to face up to our image problem too. We need, more than ever, to attract and retain talented people to work in our industry," James urges. "We're in competition – whether we like

it or not – with other sectors, including industries and professions that look a lot more attractive than ours, even though beneath the surface, we've got a lot more to offer than most."

As an industry and as a global statement, we are making big strides to improve the health, safety and welfare of our workforce. Over the last 10 years, the UK has seen a huge 83% reduction in Lost Time Injuries, driven by an increased emphasis on the competence of management and the workforce and a sustained commitment towards the goal of zero harm.

"It is a credit to the industry that, even under considerable economic pressures, investment in training and qualifications has been sustained, demonstrating the extent of the commitment to competence and the further improvement of health and safety performance. This emphasis on individual competence extends through the supply chain. There has been a trend towards greater contracting-out of operations such as maintenance and load and haul, so it has become increasingly important to ensure that people in the supply chain can demonstrate competence and are properly inducted and involved in site operations from a health and safety point of view."



Cliffe Hill Quarry produces up to 4.5-million t of Markfieldite granite aggregate/year and predominantly supplies the construction and road building industry, through the company's quarrying, asphalt and rail distribution operations. Some 40% of the aggregates sold are delivered by rail. Cliffe Hill has a production level of 600 000 t/year of asphalt materials (courtesy UK Institute of Quarrying).

And all of this points to a challenge of leadership. "If we're going to attract fresh, new talent; if we're going to tackle red tape and to improve our environmental performance; if we're going to rise to the challenge of increasing productivity, quality and profitability at the same time as maintaining an unwavering approach to zero harm, we all have to show effective leadership at the same time as developing the leaders of the future."

He says that while we face some particular challenges in our own companies and in our own countries, many of the issues across the globe are the same. Chief among these is the challenge of attracting, retaining and developing the right people to be able to take our industry forward.

"And tackling these challenges calls for great leadership, which is where the Institute comes in as the professional home for leaders in our industry and as an organisation that is able to facilitate networking, learning and support on a global basis."

Where is the Institute in all of this and what does it need to do to support members across the world in facing up to these challenges?

James continues: "Firstly, we are a global organisation. We are formally

established in various parts of the world. We're here – in force – in Southern Africa. We have a branch in Hong Kong; there's an Institute of Quarrying Australia, UK, New Zealand and Malaysia. We have members where we don't have offices – in India, the Caribbean, West Africa and Ireland. And we do make an impact upon global standards through the reach of our education programmes that produce skilled and knowledgeable managers from San Diego to Stockholm."

The Institute has a set of well-established professional standards that are applied through its membership criteria, CPD requirements and codes of practice.

"As a learned body, we have a vast knowledge base that has been developed over the 97 years that we've been in existence. There's much that has been formally recorded in training materials, papers, articles, videos, presentations and so on. But, there's much more that lives and breathes among our network of members. If you have a problem, there is – without doubt – someone within the Institute of Quarrying that will be able to help.

"But there's more that we need to do as well to make sure that we're relevant, attractive and influential, not only to our members but to a wider group of stakeholders. So let's dive a bit deeper. Let's

put ourselves to the test. Let's take a look at what work we're doing to rise to the challenges presented to us by industry," James urges.

Good start

This year (2014), got off to a fantastic start, with the Institute launching its new Technical Grade of Membership, or TMIQ. "Now launching a new grade of membership is not something that professional institutions do very often," he says.

"TMIQ is about extending the reach of the Institute to a population of professionals within our industry that are often the 'unsung heroes' of our sites and projects. TMIQ is a mark of professionalism for our colleagues that are highly-skilled technicians or first-line supervisors. It's an achievement, something to be recognised and celebrated; and it's an important step for the Institute to have taken.

"By introducing Technical Membership, our members are saying, boldly and clearly, that they want to be part of an Institute that is open, inclusive and progressive, providing a home for all the professionals at all levels to develop their skills, knowledge and networks. It also shows that we're an Institute that cares just as much about its future, as its past."

In the UK, the Institute is taking that

approach one step further with a project known as 'PRIME'. This is a partnership with a number of other industry bodies and is about recognising the contribution that everyone in the industry makes to running safe and productive sites.

"It's about setting an expectation that, as professional people, it is everyone's responsibility to get involved in CPD and the PRIME project itself, aimed at raising awareness among employers and the workforce that CPD really matters, and taking a professional approach to the job is something that everyone can be expected to do. We're implementing new ways for people to plan, do and record their CPD activities. Ultimately, I think we'll see the emergence of PRIME sites and PRIME contractors in recognition of those companies and quarries that take the involvement and development of their people as a critical ingredient of their operations."

Last year the Institute launched a CPD accreditation scheme, which operates as a kite-mark or a quality standard for a wide range of learning resources: seminars, technical papers, articles, conference programmes, training courses, etc.

To become accredited, a series of quality checks are made on the providers of the training materials to ensure that clear learning objectives can be demonstrated and that the quality of the information is of a high standard. "This means that our members – and in fact anyone looking for good quality CPD – can look out for this logo and be sure that their time will be well spent on this particular learning activity.

"We're doing a lot of work to give our members access to the knowledge they need to do their jobs more effectively and to develop their personal skills," James confirms. "As well as providing high-quality learning materials, we're looking at harnessing the power of our network of members and encouraging sharing of information and resources through investment in a new website, aimed at delivering new benefits to members.

"We're also increasing the frequency and quality of our communications and to achieve higher levels of member engagement through the use of the web and social media. It's through social media such as Twitter and LinkedIn, that the world becomes smaller – or at least a better

connected place – so we're able to post updates and start conversation to encourage members to network across the globe."

Education

This year, the Institute has extended its range of formal education programmes that are run through the University of Derby in the UK. It is now offering a full Honours Degree programme that complements the now-established Foundation Degree. All its formal programmes are available in both UK and international formats.

The educational materials have been updated and overhauled, and there is a marked emphasis on business management in the Honours Degree, with the aim of turning out rounded graduates with the right blend of technical and managerial skills. Individual modules are also available as University Certificates in subjects such as blasting and business studies.

"Since the Institute owns all of the intellectual content of the university programmes, we are able to use this knowledge base to offer tailor-made training programmes to meet specific training needs within companies, using an interactive online learning platform and supplementing this with face-to-face sessions," James adds. "We will also accredit in-house training courses, to give third-party accreditation to programmes that are run within a particular business and to provide some reassurance to that training and its value within the wider industry."

He emphasises that education activities go much further than formal training courses, through conferences such as the IQSA's, through Branch events and reading materials, and through access to the same online knowledge base that is kept up to date by the Institute's network of members, as well as engagement in research and innovation schemes.

"And all of this is available worldwide to members and non-members of the Institute and to people working in every corner of our industry, whether it is to

reinforce knowledge and skills so that someone can continue to operate competently and effectively within their job role, or whether it is for people who are looking to learn new skills and knowledge in order to enhance their careers and move into different roles within the industry.

"So, there's an awful lot going on to develop the Institute, but there's much more that we need to do to develop ourselves as a strong and relevant professional body with a worldwide remit," he says.

"Take our name, for example, which represents who we are – or at least who we have been. The word 'quarrying' could be seen as either a sign of strength, indicating expertise and a focus that is clear and unequivocal; or it could be a limiting factor, ignoring the fact that we operate as part of a supply chain within which there are other added-value mineral products," James suggests.

"We perhaps need to recognise the role of secondary and recycled aggregates, which make up nearly 30% of the UK aggregates market. And we may also need to recognise that the word 'quarrying' is not necessarily used across the world."

"In many ways, our name is not the important issue. What's more important – in fact, what is absolutely critical – is identifying a set of values and standards that reflect what we're about in all corners of the globe. What do we stand for? As an individual member of IQ, what do I believe in and what are the standards I expect of myself and of others?" he asks.

"Ultimately, what should the Institute be doing about the different operating standards that we find in different parts of the world? Should we have a presence in a particular country because we think there is membership potential? Or, should we see our role as intervening in territories where, for example, the conditions of work or health and safety performance is not as we would expect of a professional body whose job it is to take a leadership role and promote best practice?

'I am not suggesting that we should simply change our name; I am indicating that we might want to think about the space that we occupy within our sector and how that might change in the future.'



HAULING PROFITS BY THE TRUCK LOAD.

Operators know the reputation of Volvo articulated haulers. Heavy-duty frames and bodies built for long life, whatever the conditions. The F-Series features low emission engines and Automatic Traction Control as standard, reducing fuel consumption, tyre wear and operator fatigue. Powerful hydraulics raise loaded bodies, even on steep downhill gradients, while strong brakes always keep things in check.

Volvo's F-Series haulers: power when the going gets tough.
Contact Babcock and discover the legendary performance for yourself.



trusted to deliver™

Babcock International Group: Bartlett Tel (011) 230 7300, Fax (011) 397 2686, enquiries@babcock.co.za, www.babcock.co.za | BRANCHES: Bloemfontein (051) 432 1226 | Cape Town (021) 380 4700 | Durban (031) 700 6009 | East London (043) 703 0400 | Kimberley (053) 832 3443 | Middelburg (013) 246 2870 | Mocambique +258 21 321 824 | Nelspruit (013) 758 1864 | Port Elizabeth (041) 407 5900 | Richards Bay (035) 751 1180 | Rustenburg (014) 592 6150 | Steelpoort (013) 230 9054 | Wolmaranstad (018) 596 1514 | Windhoek +27 (0)82 415 8758 | Zambia +260 212 216 200 | INDEPENDENT DEALERS: Polokwane - RGR Services (015) 297 6711 | Swaziland - Swazi Trac +268 251 84 555 | Tzaneen - Swaarvoertuie (015) 307 5000 | Zimbabwe - Conquip +263 4 485 543

VOLVO CONSTRUCTION EQUIPMENT www.volvoce.com



Striking a balance

"We also need to think about how we strike a balance between being focused upon the needs of members within our various countries and our role as an international body," James states. "How do we want to be seen? Can we 'think global – act local', to borrow that over-used phrase. Modern technology, it strikes me, makes it much easier to communicate across the world and to have a consistent global presence for our industry in just about any territory where our members are operating.

"We do, however, need to ensure that we remain relevant to members on the ground and we need to recognise the power of local networking in sharing best practice and encouraging teamwork at a professional level."

Constitution

James says that if the Institute is going to be truly international, it needs to look at its Constitution – its rule book – to see how a global overview can be maintained at the same time as allowing each individual element of the Institute to flourish at a local level. "Like any organisation, we need to make sure that the way we are structured, lends itself to our strategy and the achievement of the things that we're here to do on behalf of the industry and the people who work in that industry, wherever they are in the world.

"For me, the structure and the rule book are just features of the Institute," he asserts, "they're not the main event. For me, it's back to the things that bind us together; it's back to what being a professional institution is all about; the values that we hold at our core; the standards that we expect of ourselves individually and collectively; and the power of our organisation as an international network to learn, share and create knowledge – crowdsourcing at its best.

"Now, while I'm talking about our industry and our Institute in international terms, at the heart of all of this, at the core of who we are as an Institute, is the individual member and what it means to be a member of the Institute of Quarrying. For a lot of people, becoming a member of a professional body is like getting over a hurdle. It's an achievement, the fulfilment of an individual goal. It's about being recognised by your peer group for your knowledge, your skills and your attitude; and that you are operating at a level that meets the collective expectation of being a professional.

"And that's how it should be. But for me, what sets a decent professional body apart from the rest is what happens on the other side of the hurdle. Is it about landing safely on the other side with a sigh of relief? Is it about clearing the hurdle but then raising it a bit for the next guy?"

James believes that what happens in the best professional bodies is an expectation that clearing the hurdle is just the start of things. It's not about landing on the other side, but continuing that upward trajectory. "Achieving your membership is a milestone in a journey, not the end of that journey by any means."

He says professional bodies should be there to encourage and support further professional development. Being a member reflects an ongoing personal challenge. Membership is something to be maintained. It's a dynamic, progressive thing that reflects your attitude as a professional person.

It's about lifelong learning, about staying on top of your game, about leadership. And yes, you should risk losing your

membership if you fall behind your commitments.

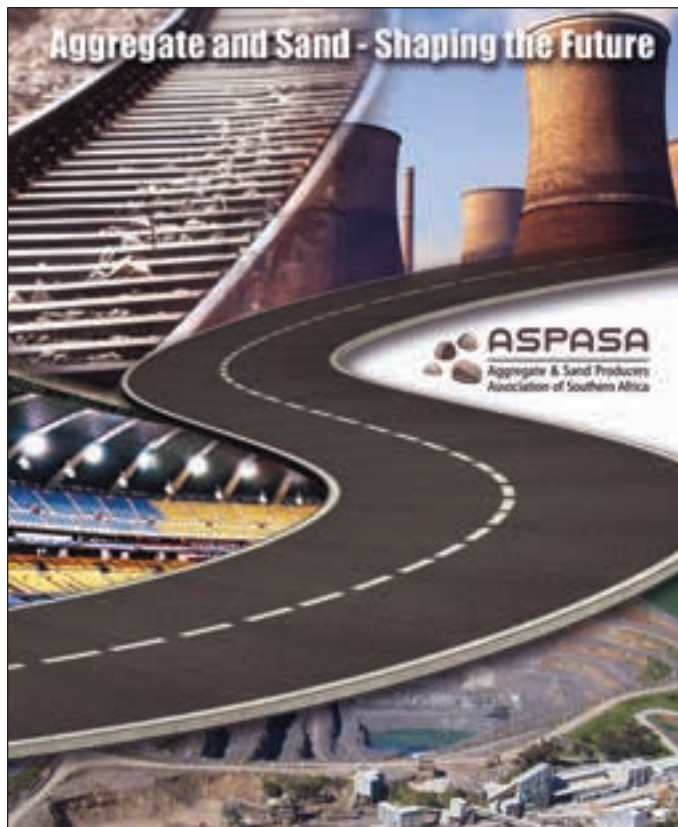
"As an industry, we are facing some significant challenges. Some of these are new, some not so new; but we're most definitely up for these challenges. We're not complaining, we're facing these challenges head on. It's why we're here," James confirms. "It's why we're doing these jobs that we love doing. We love this industry that we work in and we love the fact that we're surrounded and supported by great people, passionate people, and professional people. These are challenges that are shared by us all, wherever we are in the world.

"Amongst all that, the Institute of Quarrying has a vital role to play in supporting us, wherever we are in the world, whatever the particular individual challenges that are facing us in our day-to-day roles, and whatever the larger-scale challenges that may be at the top of our agenda in a particular territory.

"We're an Institute that is rapidly approaching its 100th birthday and an Institute that is built on the principles that its founding fathers installed in us when we were formed back in 1917. We have a legacy and a heritage that we should be proud of.

"I am absolutely certain that we have a future that is more exciting than anything that we've seen in our past," James concludes. "It is a pleasure to be part of the Institute of Quarrying, a real privilege to be here at a time that is so full of optimism for our future as a truly worldwide Institute."

Report and pictures, unless otherwise accredited, by Dale Kelly



Aggregate and Sand - Shaping the Future

ASPASA
Aggregate & Sand Producers
Association of Southern Africa

ASPASA
Contact Nico Pienaar on Tel: +27 11 791 3327 • Cell: 083 419 0010
email: office@aspasa.co.za or nico@aspasa.co.za
Unit 8 Coram Office Park, Ferreiro Road, Randpark Ridge, Randburg, Gauteng,
South Africa, PO Box 1983, Ruimsig, 1732
www.aspasa.co.za



Pilot Crushtec International marks major Sandvik milestone

South African crushing and screening expert Pilot Crushtec International has reached a major milestone with the sale of more than 50 Sandvik mobile construction products less than 18 months after the announcement of its distribution agreement with the company.



Pilot Crushtec International director sales Graham Kleinhans.

Almost 40% of these have been bought by mining operations looking to increase the scale of their operations. The range of crushers, scalpers and screens are some of the most powerful Pilot Crushtec International has ever supplied. The variety of applications in which these products are employed goes to emphasise the inherent suitability

ity of the range for meeting rugged African conditions.

These include the extraction and processing of coal, iron ore, diamonds, manganese and copper as well as a host of base metals. A further 30% are engaged in the quarrying and construction industries, as the durable, high output machinery is perfect for these conditions.

The agreement, which established the Jet Park-based company as sole distributor of Sandvik's mobile range of equipment, was the precursor to a campaign devised to gain substantial market share in South Africa and sub-Saharan Africa.

Pilot Crushtec International director sales Graham Kleinhans believes that the association is certain to go from strength to strength. "There is no doubt that one gains massive confidence from working with a supplier that has produced world-class engineering products for more than 150 years," he says.

Kleinhans says this excellence begins in the design process with Sandvik's meticulous attention to detail, and extends to build and finish. However, it is the results that these attributes deliver to customers in Rand, Dollar and Euro terms that count most. "Simply put, they are highly productive and cost effective to operate."

He cites a number of instances over

the past 12 months in which the brand is making a positive contribution to customer operations in local and sub-Saharan Africa projects. "A typical example is a customer now operating a UH440i mobile jaw crusher to produce hard material in greater volumes and at a significantly lower cost than with his previous brand of equipment.

"Another case is that of a provincial roads authority that is now handling a fleet of Sandvik QJ241 jaw crushers in its programme to build and maintain gravel roads. This has not only resulted in a better than fourfold increase in productivity, but a vast improvement in the integrity of the finished product," says Kleinhans.

The ingenuity of Sandvik's engineering is apparent in the design of its UD211 multi-product system currently in use at a Zambian copper mine. "The customer has the use of a grizzly feeder, jaw crusher, cone crusher and multislope screen in a single towable unit; a turnkey solution on wheels," Kleinhans says.

"Our partnership with Sandvik coincided with the beginning of the current economic downturn, but the fact remains that our sales of products in these categories have actually increased during this period."

He attributes this to three significant factors: Firstly, Pilot Crushtec International read the market correctly in perceiving a large-scale pent up demand for high capacity machinery and, secondly, the historical strength and acceptance of the Sandvik brand in African markets. "Finally,



Above: The company has reached a major milestone with the sale of more than 50 Sandvik mobile construction products in less than 18 months.

Right: The Sandvik QA331 mobile screen fitted with an optional double deck vibrating grizzly (DDVG).

the implementation of a distribution strategy which ensured that the key elements were in place from the very beginning, underpinned by comprehensive stocks of finished products and spares, backed by fully-trained service and installation teams," Kleinhans confirms.

Gomes Sand

Pilot Crushtec International's sale earlier this year of a second high-volume washing plant to Gomes Sand represents the latest in a series of large-scale additions to the Midrand sand specialist's fleet. Not only does this illustrate the depth of a business relationship forged well over 20 years ago, but a significant increase in demand for its sand and associated products from the regional civils and construction industries.

Pilot Crushtec International national sales manager Nicolan Govender says that the process began last year, when it became clear that demand was outstripping capacity, prompting Gomes Sand to turn to its long-term supplier for assistance. "Following in-depth discussions with the customer to identify the best solutions to meet his needs, we made our proposals and began the delivery, installation and commissioning of a comprehensive range of crushing and screening machinery."



The first products to arrive on site were a Pilot Modular/TRIO MJ2436 jaw crusher and a Pilot Modular DD4815 double screen. These were followed by a Sandvik QA331 mobile screen fitted with an optional double deck vibrating grizzly (DDVG) and a Pilot Modular/TRIO MJ1252 jaw crusher.

The washing plant has the ability to yield an output of up to 150 tph.

"Volumes like these are absolutely essential considering current demand and the customer's extensive range of products. These include river and plaster sand, 19 mm stone and base course materials."

Owner Gerardus Gomes began dealing with Pilot Crushtec International in the early 1990s and has remained loyal to the brand ever since. "They always have stock

of finished products and spares, which is very important as the industry is moving up a gear. We have always received good service with a bare minimum of problems and the products work well. It was natural to seek Pilot Crushtec International's advice when we needed to increase our output."

Laezonia-based Gomes Sand has long been an active participant in the construction industry and was first established nearly 70 years ago when it started trading as A Gomes Transport. The company has since gone on to win an enviable reputation for service and the quality of its products with a history of involvement in prestige projects including Monte Casino, the Michelangelo Hotel and Kyalami Racetrack, to name a few.

www.pilotcrushtec.com

AfriSam opens centre for supplier development

AfriSam recently opened its Supplier Development Centre in support of the company's Enterprise Development Programme, which has been implemented as part of a transformation drive in the country, especially in areas where the company operates.

The aim of the Supplier Development Programme is to identify black-owned Small, Medium and Micro Enterprises (SMMEs) close to the company's operations and provide these entrepreneurs with the necessary support and development for them to grow their business and ultimately be included in AfriSam's database of registered vendors.

To date, AfriSam's Enterprise Development team has held SMME campaigns

and open days with communities around the company's Lichtenburg, Roodekrans, Roodepoort and Eikenhof operations. More communities will be included as the programme is rolled-out to other provinces in the future.

Situated on a property adjacent to AfriSam's Roodepoort Cement operation, the Business Development Centre will also provide SMMEs with a facility where they will have access to computers that have already been set up with an accounting package, to enable them to manage their statements and invoices to their customers.

The Centre for Supplier Development, a company focusing on SMME development, has been appointed to provide entrepreneurs from identified communities with training and development that will capacitate them to a level where they can do business with AfriSam and other companies.

In Lichtenburg, Motswiri Consulting has been appointed to a similar task of identifying and developing entrepreneurs from local communities around the Dudfield operations, and upskill them to

a level where they operate efficient and sustainable businesses.

Of the entrepreneurs that will be identified and developed in Gauteng and Lichtenburg, a short list of suppliers will be enrolled in an accelerated development programme, with the aim of ensuring that they are ready to do business with AfriSam.

"This is a wonderful example of how AfriSam lives its values of People and Planet and making a sustainable difference to the communities where we operate. Well done to the Enterprise Development team for making this happen and AfriSam looks forward to contributing towards the sustainable growth of these businesses," says Calie Ehrke, AfriSam's supply chain manager.

Top suppliers honoured

The company recently honoured its top suppliers at the 8th annual Suppliers' Awards, an event which has become the highlight of the industry to those providing excellent service to AfriSam throughout the year.

Suppliers play a critical role in AfriSam's business and are seen more as strategic business partners in the company's long-term growth plans than just providers of goods and services. The awards aim to thank and reward them for their superior performance, reliability



Dr Stephan Olivier, CEO of AfriSam, cuts the ribbon at the opening of the Business Development Centre.



From left Nico Gerber, Cargo Carriers; Bradley Herbert, AfriSam; Tiaan Parkin, Interfreight Vervoer; Phil de Wet, Linde Materials Handling; Pieter Schutte, Insimbi Alloys; Stephan Olivier, AfriSam; Roy Padayachee, Klipstone Transport; Dean Leggat, Klipstone Transport; Patrick Borman, Patrick John Borman; Thami Gwala, Saflog Consulting Services; and Calie Ehrke, AfriSam.

and quality – principals which are encouraged and practiced by AfriSam in efforts to remain the customer of choice for its suppliers.

This year 13 winners were acknowledged as suppliers to AfriSam's different business units and regions according to specific categories and then rated against criteria considered critical to the company's business imperatives.

"Every supplier of AfriSam forms a critical part of the day-to-day operation of our business and is regarded by AfriSam as strategic business partners to ensure the future growth and success of our company. We utilise the Suppliers Awards function to recognise those suppliers who have excelled in their service delivery to AfriSam," says Ehrke.

AfriSam has over 3 000 vendors and each one plays an important role in the successful running of the business. This

makes the competition tougher every year as suppliers strive to enhance their product and service delivery. "We consider a range of criteria that vary from total spend to B-BBEE status, from safety records to quality of service or product, from contribution to our brand to pricing policies and future market trends, to mention just a few," adds Ehrke.

Among those honoured at this year's prestigious ceremony were: Linde Materials Handling (Pty) Ltd for Most Improved Key Supplier of the Year, with Insimbi Alloys Suppliers (Pty) Ltd taking the much coveted Key Supplier of the Year award.

BEE Supplier of the year award went to Saflog Consulting Services (Pty) Ltd, and Ilca Trading (Pty) Ltd took the SME/QSE Supplier of the Year crown.

Cement transporter, Klipstone Transport (Pty) Ltd, dominated the

Transporter category by receiving a special award for improving its BEE status by 51% over the last year. The company also took home the cement-branded Transporter of the Year Award.

Other winners in the Transporter category for branded cement fleets included Long Distance Dedicated Contracts (Swaziland) for the Safety award; Unitrans Freight (Pty) Ltd for Corporate Identity, and Cargo Carriers (Bloemfontein) for Service Delivery. Third-party Transporter of the Year was awarded to Interfreight Vervoer, with Patrick John Borman taking the Readymix Transporter of the Year.

AfriSam internal teams were also recognised for their hard work, with the Gauteng Procurement team taking the Best Improvement award, and the Accounts Payable team winning the award for Above Average Performance within AfriSam.

www.afrisam.com



The Lokotrack LT220D provides cost-effective solutions for shorter-term contracts, with on-highway transport enabling rapid machine deployment between sites.

New frontiers in mobile processing

The latest addition to Metso's mobile crushing and screening range, the Lokotrack LT220D is set to revolutionise the way aggregate contractors operate around the world. Combining a cone crusher and a three deck screen on a single track-mounted plant, the Lokotrack LT220D reduces operational costs in several ways, most notably by substantially lowering fuel consumption and reducing the need for maintenance.

"The Lokotrack LT220D is the first track-mounted crusher/screen combination to

be developed with such compact dimensions, a world first for Metso," says Jarmo Vuorenpää, project manager at Metso Mining and Construction.

The Lokotrack LT220D is equipped with a proven, high-performing Metso cone crusher, either the HP200 or the GP220; whilst an intelligent control system ensures safe and reliable processes in all applications.

Paired with Metso's primary Lokotrack LT106 mobile jaw plant, the LT220D secondary crushing and screening unit is

capable of producing up to three calibrated end products. In turn, the large 8,4m² screen fitted on the LT220D provides high capacity, as well as excellent screening efficiency.

Power to run the crusher and screen is delivered by a single Cat C13 diesel engine generating 309 kW. Hydraulically operated screen lifting and folding side conveyors enable the Lokotrack LT220D to be ready for action in just minutes. Weighing in at 48 t, the LT220D measures 16,5 m in length, with a width and height of 3,0 m and 3,5 m respectively.

www.barloworld-equipment.com

FLSmidth grows equipment base

The global growth of FLSmidth's comprehensive range of screening and vibrating equipment is being reflected in Africa with a steadily increasing installed base across mineral processes and commodities in several countries on the continent.

The group's screening capability took a major step forward in 2012 with the acquisition of Ludowici, a world-leading provider of reflux classifiers, coal centrifuges, vibrating screens and complementary wear resistant products and services for the minerals industries. This allowed FLSmidth to complete its coal processing flow sheet and complement its copper and iron ore processing offerings with leading technologies.

"Our principal screening and feeding installations in Africa are in Ghana, Zambia and Mozambique and we're currently busy with a very large project that will showcase our capability in this arena in South Africa," Jurgen Cneut, FLSmidth technology specialist, vibrating equipment, says.

The group's technology centre for screening and vibrating equipment is located in Brisbane Australia, where ongoing R&D work is focused on developing new designs and manufacturing processes to boost efficiencies and optimise designs, while maintaining the product quality to which the market is accustomed.

FLSmidth South Africa is one of the few vibrating screen manufacturers to have its own in-house panel manufacturing operation under the FLSmidth Screen Media (formerly Meshcape) brand. Research into combining the company's Ludowici and Meshcape panel designs is progressing rapidly, with the objective of boosting the durability of the end product to achieve a reduced total cost of ownership for customers.

A major benefit to the local market is that screening and vibrating equipment is manufactured at FLSmidth's Supercenter in Delmas, Mpumalanga, which exists as a multi-faceted hub for FLSmidth activities throughout southern Africa.

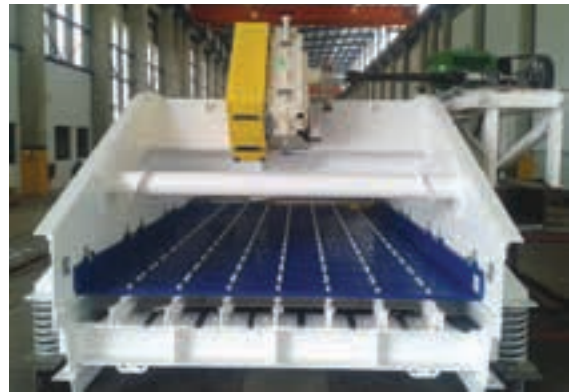
"The major drivers here are cost savings and being able to provide local support, including inventory holding, to customers," Cneut says. "Manufacturing these products locally speeds up the

entire supply chain."

FLSmidth screening and vibrating equipment is differentiated in the marketplace by its robust designs that deliver a longer lifespan and incorporate unique features, such as an integral feed box as a separate component from the screen unit, which can be replaced without the need to cut or modify the screen. The unit simply unbolts from the screen frame and is replaced with a new one. FLSmidth is one of only a few companies to offer this design feature in Africa. The company is also differentiated by designing and manufacturing a range of exciter drives used on the bigger banana screens.

"In addition to the standard designs in the range, we're also able to tailor make screens to suit individual customer applications," Cneut adds. "For example, we've just completed a year-long test of a 4,8 m wide screen designed for the coal industry, which has proved that a screen of this size can work extremely efficiently over the long term. Another recently completed large screen, destined for a customer in South America, is a double deck unit weighing 54 t."

FLSmidth's Ludowici range of vibrating equipment comprises primarily linear motion, high G force, heavy-duty designs suitable for all mining and mineral processing applications. Sizes range from 0,6 m wide up to 4,8 m wide with lengths from 1,2 m to 11 m. The range largely consists of heavy and medium duty vibrating screens, primary grizzly feeders and heavy and medium duty vibrating feeders. Of further interest in the product range is the FLSmidth Ludowici Jetslinger that distributes free flowing bulk materials, inaccessible by other mechanical means, to form storage piles, and the FLSmidth Ludowici stockpile discharger that facilitates a controlled outloading rate of up to 8 000 t of coal/h. The stockpile discharger effectively prevents rat-holing and bridging of the material to achieve a greater



FLSmidth Ludowici vibrating screen.

live area in the stockpile.

FLSmidth is the African market leader in the supply of centrifuges that have an unequalled track record of performance and reliability. The range includes coarse and fine coal centrifuges featuring high capacity, advanced technology, durability, value and efficiency. All centrifuges are backed by professional support and on-site service. The fine screen product range is completed by the company's innovative Reflux Classifier technology, now accepted as the preferred fines gravity separator by the major global producers of metallurgical coal.

"Our local customers benefit greatly from our access to the global FLSmidth organisation's process teams, enabling us to efficiently streamline all this equipment to suit individual client applications," Cneut says. "As a group, we're substantially bigger than an OEM that simply manufactures screens. Drawing on this immense knowledge base, we can examine upstream and downstream processes to ensure our screening and vibrating equipment improves the efficiency of the total process."

"Our corporate philosophy drives our capability to offer the majority of plant equipment from one source making it easier for our customers to know they are receiving integrated solutions that are optimised for maximum efficiencies. As an ISO 9001-accredited company, we build all our equipment to global quality standards."

Safety is a major driver in the organisation, driven by the desire to keep the end user safe. FLSmidth considers health and safety as a key element for sustainable business, closely integrated with engineering, quality and production.

www.flsmidth.com

New approach to chute systems

It is critical to consider the basic chute specifications when addressing a material transfer problem. This calls for a thorough knowledge of transfer point design as well as the ability to determine best practice for an application and the willingness to customise each design to these specific requirements.

All of these factors are catered for by the Weba Chute System concept that incorporates a supertube or cascade effect which results in material running on material at all times. Weba Chute Systems' MD Mark Baller, explains that during the development stages of this locally-manufactured and patented product, specific attention was paid to minimising the abrasive wear induced on the chute's wearing components. "We have proved through numerous successful installations of Weba Chute Systems that the correct use of our streamlined scientific approach to the dynamics of bulk materials handling completely eliminates the problems associated with conventional transfer chutes and results in significant cost savings."

He points out that the Weba Chute System is not an alternative to conventional chute systems. "It is rather a completely different and unique approach towards the control and handling of bulk materials. When viewed in slow motion one can see that the bottom layer of particles in the product stream moves in a tumbling motion rather than gliding down the chute. This motion results in significantly reduced wear and, in many cases, one finds that the lip remains completely covered by material, which results in it never needing replacement."

The Weba Chute System takes material movement control to a new level with the design of the internal angle of the transfer chute matching the belt speed and in so doing, spillage is either



Individual Weba Chute Systems are configured to control the direction, flow and velocity of the calculated volume and type of material processed in a particular application.

completely eliminated or greatly reduced. As an added benefit, the presence of dust is also greatly decreased.

By custom designing each transfer point, individual Weba Chute Systems are configured to control the direction, flow and velocity of the calculated volume and type of material processed in a particular application. The end result is a transfer point that substantially reduces maintenance expenditure in minerals processing, through increased productivity, decreased replacement and maintenance costs and increased adherence to environmental regulations.

www.mjeng.co.za

Auto Rod technology


Atlas Copco's Rig Control System (RCS) continues its legacy of enabling automation to promote safe, lean and productive mining with the patent-pending Auto Rod Change technology.

The Auto Rod Change (ARC) system is a milestone for Atlas Copco's Pit Viper blasthole drill product line, seamlessly integrating into the existing AutoDrill for a complete multi-pass product. Throughout the AutoDrill process the system reliably and efficiently adds rods to reach target depth and removes rods during retract and cleaning phases.

The company's primary goal with the ARC system was to build a fast, repeatable and reliable system. Taking a holistic approach, the seamless multi-tasking software controls are coupled with a redesigned mechanical breakout system and sensor suite to deliver a mine-ready solution. ARC has been tested and run in a variety of mine conditions to ensure it is ready for the demanding environments an Atlas Copco blasthole drill will face.

This proven system works in a vertical or angled tower position, and has an updated mechanical system and hardened sensor suite that work together while drilling. The ARC system has undergone several field tests, already drilling over 110 000 m.

www.atlascopco.com/blastholedrills




FRACTUM

When breakage is business

No more need for secondary blasting

WE BREAK ANY ROCK BOLDLY
YOU OOME AFTER
INVENTORY IN SOUTH AFRICA

www.fractum.co.za





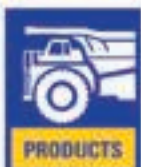
WE'LL TAKE CARE OF IT



With our innovative and quality products.

An international leader in the field of quality and reliable equipment, Komatsu is a diversified provider of construction & mining equipment, compact utility equipment and forestry machines.

DRIVEN BY YOUR SUCCESS



KOMATSU

Komatsu South Africa (Pty) Ltd, cnr Diesel and Isando Roads, Isando.

Tel: 011 923 1000 | Fax: 011 923 1111

Customer Care Line: 0860 566 2878

www.komatsu.co.za

New versatile screen on offer



A 2624VM high-frequency screen in a modular set-up.

The Multi-Frequency screen manufactured by Astec Mobile Screens in the United States is the latest addition to Osborn's equipment offering, and product specialist Shane Beattie believes it is set to take the local quarrying and aggregate industries by storm.

"The Multi-Frequency screen is the most versatile screen on the market in terms of frequency and amplitude," Beattie states. "It can handle any job thrown its way, without sacrificing performance or profit. We are very excited to have the opportunity to market, sell and support this product in southern Africa for sister company Astec Mobile Screens."

Choosing an Astec Mobile Screens Multi-Frequency screen means integrating conventional and high-frequency

screen movements to help maintain a higher production rate, Beattie explains. "Because of this, wet materials become easy to manage. In addition, more amplitude and less frequency for coarse materials, and less amplitude and more frequency for finer materials, makes this versatile screen easy to apply in a variety of applications. The operating angle is

lower than our high frequency screens, making this machine safer to work on and operate. Because it allows for flexible sorting diameters and frequencies, there really is no job that the Multi-Frequency screen can't handle," he confirms.

In addition to Astec's Multi-Frequency screen, Osborn has also added the company's high frequency screens to its equipment line-up. Osborn is offering two types of Astec high frequency screens: the Vari-Vibe® screens are ideal for post-screening applications and offer high frequency vibrations on all decks; and the Duo-Vibe® screens, which are ideal for pre-screening applications by offering a scalper top deck with conventional frequency mounted over high-frequency bottom decks. This configuration improves production needs earlier in the circuit by removing fines from coarser materials.

www.osborn.co.za

New scalping screen

Powerscreen, a leading providers of mobile crushing and screening equipment, launched its new Powerscreen® Powertrak 750 at the recent Hillhead exhibition in Buxton, UK. The unit is a multipurpose scalping machine, robustly constructed, and geared towards heavy duty scalping in applications such as blasted rock, overburden and C&D.

The Powertrak 750 screen features a Deutz D914 engine as standard, but can also be supplied with a fuel efficient Stage IV Final compliant Caterpillar C3.4 engine. With a vibrating grid feed-in width of 4.4 m, the machine can easily be fed with an excavator, loading shovel or grab. This coupled with its compact, sleek design and ease of movement makes the Powertrak 750 screener the ultimate choice for contractors, quarry operators and recycling customers.

www.powerscreen.com

LiuGong raises customer service standards

The LiuGong/Cummins training centre is now in full operation at LiuGong's state-of-the-art premises in Kempton Park. The new facility has been designed for LiuGong distributors and customers to familiarise themselves with the Cummins engines and related components.

As a manufacturer, the LiuGong joint venture with Cummins places the company in a strategic position to supply high-quality engines tailor-made for LiuGong machines.

According to Paul Lee, regional manager for LiuGong Machinery SA, it is a perfect marriage of exceptional engines and power construction equipment that

together are a force to be reckoned with.

The LiuGong/Cummins training centre trains distributors, technicians, engineers and sales managers to deliver professional after-sales service in a bid to raise industry service standards. The centre provides training on overhaul, maintenance and electrical Cummins components.

"Servicing is a very important aspect of equipment maintenance," Lee says. "A well-maintained piece of construction equipment means less downtime, high productivity and lower costs for our customers."

www.liugong.com



Above: Mr Wang Jun, director, Customer Service Support, Cummins China (left) and Mr Zhu XionBing, GM for LGSA and LGME.

Right: Paul Lee (right) with BurGerS Equipment and Spares SA's Tian Burger.



Packed full of bright ideas.

COMBILITE



**People You Know.
A Brand You Trust**

For more information on our full range, contact us:

Call centre: 0861 100 190

Website: www.bwep.co.za

ALLIGHTSYKES



**Barloworld
Power**

HPE optimistic for WCape turnaround



The McCloskey International S130 Triple Deck screener.

"In spite of South Africa's current sluggish economic conditions, we are cautiously optimistic about a turnaround in the Cape region – in fact, economists predict a more positive outlook for the Western Cape than the rest of the country," notes Alex Ackron, MD HPE Africa (a division of the Capital Equipment Group, Invicta Holdings Limited). "As part of HPE Africa's strategy to cope with a more buoyant market, the Cape Town branch is extending its range of equipment to meet growing demand for reliable earthmoving equipment in the Western Cape – particularly in agriculture and construction.

"HPE Africa, which is the sole distributor for Hyundai earthmoving equipment in Southern Africa, now offers a complementary range of products to enhance

the company's service to diverse industries, including plant hire, construction, agriculture, quarrying and mining," he says.

Apart from Hyundai earthmoving and construction equipment – which encompasses wheel loaders, excavators, skid steer loaders and backhoe loaders – the company's range now includes McCloskey crushing and screening plants, MB crusher buckets, as well as Soosan hydraulic hammers and drills.

The HPE Africa Cape Town team, headed by recently appointed branch manager, Gary Pneumaticatos, enhances this extensive product range with technical expertise and a reliable support service throughout the Western Cape.

www.hpeafrica.com

Forklifts for any application

BLT SA's extensive range of Taylor materials handling equipment – which encompasses loaded and empty container handlers, reach stackers and forklifts – now includes the TX4 series articulated 4-wheel drive forklift trucks, designed for moving materials in the harshest environments, including muddy and rough terrain.

"Unlike comparable articulated forklifts, this series is not a front loader chassis with a fork attachment, but a robust articulated material handler, completely designed and engineered in the USA, to the highest standards, by Taylor Machine Works," says Charity Gumede, marketing director, BLT SA.



The robust TX4 forklift series is ideal for harsh environments.

"TX4 all terrain forklifts – which can be fitted with specially designed attachments for various materials handling tasks – ensure efficient operation, low maintenance, optimum safety and extended

SDLG wheel loader earns praise

Main Reef Crushers recently deployed a 5,0 t (3,0 m³) bucket SDLG958 wheel loader at its Roodepoort operation and reports that it is working non-stop and on a par with its existing equipment.

"Although we had not purchased SDLG equipment before, we were completely confident in buying this unit from a reputable company like Babcock, which is able to offer a proper service warranty," says owner Jacques Lombard. "This wheel loader has already had its first maintenance service and I was very impressed with the Babcock team's professionalism. In fact, I've never experienced this high level of service in all my years in the earth moving business."

Lombard's comments reflect the local market's steady uptake of SDLG construction machinery. Another first-time user, Pretoria-based Chromecrete Readymix, part of Silverstone Crushers, has expressed satisfaction at the performance of its newly-purchased wheel loaders.

The two 3,0 t 1,8 m³ SDLG938 wheel loaders were purchased to support its expanding operations. The company's Hans Kotze says he's impressed with this full-featured machine's power, speed and manoeuvrability which enable his team to get more work done in less time, with less effort. "The quality of these machines is excellent and, based on the aftersales service and support we've enjoyed, I would recommend Babcock to anyone," he says.

SDLG is a value-added range of mechanically-driven wheel loaders, graders and vibratory rollers, ideal for applications in the re-handling, construction, quarrying, agricultural and aggregate industries. These machines offer extended trouble-free operation and are extremely maintenance friendly, fitted with basic electronics and standard components.

www.babcock.co.za

service life in arduous conditions."

TX4 high lift forklifts, with an all-welded steel chassis and frames for optimum strength, offer resistance to dynamic/shock loads. Benefits of this robust series include a heavy-duty bolted planetary drive axle; large, all terrain tyres for good traction in harsh environments and fully adjustable pin-mounted forks, which are forged from heat treated steel, that allow for flexibility of operation.

www.bl.co.za

Quarries lauded for diligence

Aspasa has awarded the country's top performing quarries in terms of the Association's own strict requirements for health and safety together with compliance with relevant legislation. Its members are required to be audited annually to ensure the highest level of professionalism is maintained.

Although all operations are expected to maintain an overall high standard of health and safety awareness, this year's winners – in various categories – were singled out as exceptional and selected from over 110 quarries that took part in the 2013 audit procedure.

The audits are undertaken by Marius van Deventer – a knowledgeable and astute auditor – who personally visits all member quarries and scores them according to the audit document requirements.

According to Van Deventer, no changes have been made to the audit protocol in the last two years, to give operations the opportunity to maintain their systems and to keep from moving the goalposts from an audit point of view. "The main focus of the ISHE audit protocol is still legal compliance, industry requirements and leading practices, measured against own policies, procedures and standards, with OHSAS 18001 as the specification for developing the documented safety system," he says.

"Extreme attention is given to technical installations, workshops, facilities and the quarry pit itself; also to ensure that the documented system is fully implemented and used by those that are responsible to do so. Emphasis is also put on accidents and incidents specific to this industry, and

findings from DMR inspectors."

He says the entire process is used as an educational learning curve for those responsible for the health and safety at the quarries, and to ensure that non-conformances are identified and then auctioned for completion.

The 2013 ISHE awards went to:

Showplace Status –

Five Consecutive Years

1. **AfriSam Coedmore:**
2009: 96,96%; 2010: 98,42%; 2011: 97,31%; 2012: 95,71%; 2013: 99,16%
2. **AfriSam Verulam:**
2009: 99,31%; 2010: 97,43%; 2011: 96,32%; 2012: 96,38%; 2013: 97,86%
3. **AfriSam Newcastle:**
2009: 96,50%; 2010: 97,40%; 2011: 97,76%; 2012: 96,65%; 2013: 97,29%
4. **AfriSam Ladysmith:**
2009: 96,01%; 2010: 96,45%; 2011: 96,23%; 2012: 96,32%; 2013: 95,64%
5. **PPC Laezonia:**
2009: 96,92%; 2010: 96,31%; 2011: 96,04%; 2012: 95,13%; 2013: 95,10%

Best Independent Operation for 2013

Midmar Crushers: This operation achieved the highest score of all independent operations for the 2013 audit, with a score of 93,93%.



Best Independent Operation: Midmar Crusher's Derryn Fourie (centre), with Aspasa director Nico Pienaar, and ISHE auditor Marius van Deventer.

Best Improved Operation for 2013

The following operations improved their ISHE audit scores by more than 10% from the previous year, demonstrating a consistent improvement of high standards:

1. **SPH Kundalila Thabazimbi: 95,56%**
2. **Afrimat De Kop: 86,31%**
3. **Eskay Crushers: 84,66%**

Best Safety Representative for 2013

Baldwin Ngubane, AfriSam Verulam: For his contribution and commitment not only during ISHE audits but also in support of management throughout the year.

Safety Officer/Manager Achievements

The following safety officers/managers introduced well-developed documented safety management systems to achieve a high level of safety performance and to change the ultimate safety behaviour at different operations:

1. **Cindy Cawood**, Eskay Crushers
2. **André Stols**, OMV Crushers Kimberley
3. **Martin le Roux**, SPH Kundalila
4. **Peter Slabbert**, AfriSam KZN



Best ISHE 2013 Achiever went to AfriSam's Coedmore operation in KwaZulu-Natal.

Index to advertisers

AEL Mining Services.....	IFC
Afrimat Aggregates Trading.....	27
ASPASA.....	33
Atlas Copco.....	6
Babcock.....	32
Barloworld Metso.....	8
Barloworld Power.....	OFC
Barloworld Power Allied Lighting Towers.....	42
Barloworld Power Rental.....	26
Bell Equipment Co.....	5
BME.....	7
FLSmith.....	18
Fractum ApS.....	39
Komatsu.....	40
LiuGong Machinery SA.....	OBC
Metso Crushing & Screening.....	24
MMD Mineral Sizers.....	19
Pilot Crushtec.....	2
Scaw Metals Group.....	IBC



scaw

METALS GROUP

A trusted industry leader

For 90 years, SCAW, a South African industry leader, has partnered with leading mining houses to ensure safety critical standards and productivity targets are consistently met. Whether it's hoisting, grinding or excavating, Scaw produces an extensive range of products that drive mining safety and productivity.

Backed up by teams of qualified engineers with extensive experience in all aspects of grinding media, steel wire rope, chain and cast products, Scaw's product specialists are available to advise on the design, selection, installation and maintenance of safety critical and mining products manufactured by Scaw.

www.scaw.co.za

*Experience
Matters.*



**Full excavator range:
Warranty: 3000 hours or 18 months
That is confidence!**



Liugong Machinery
South Africa

Wholly owned SA subsidiary

General Enquiry:
Liugong Machinery S.A. (Pty) Ltd
Tel: +27 11 979 0971 Fax: +27 11 979 0975

Authorized SA distributor

Sales & Technical Service:
BurGerS Equipment and Spares SA
Tel: +27 11 979 5181/2/3



EQUIPMENT AND SPARES SA

CG 2010/118002/23



LIUGONG

www.liugong.com