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EDITIORIAL NOTE

Andrew Maramwidze: Editor

Fare-thee-well Yaluma, Welcome Musukwa!

The mining industry continues to desire more government support and collaboration for the industry to take a great leap forward.

Recent announcement of cabinet reshuffle come at a time Christopher Yaluma and the industry were warming up to each other, as Zambia Mining Magazine - We say thank you Yaluma!

Your cooperation with the industry was a much welcome development. Openness punctuated with great dialogue is hallmarks of your tenure in office.

On the horizon, the mining industry stakeholders were already seeing the promised land of sustainable mining industry, where all the components are well oiled, pushing forward the big machine.

Welcome Richard Musukwa! Mining is the cornerstone of the economy and a lot is at stake.

Stakeholders are already looking up to your moves and how you will steer the ship forward to sustain the achievements made already.

With a number of issues that the industry is reeling under such as the power tariffs concerns, policies and legislation that are archaic and hindering attraction of foreign direct investments should be changed.

Minister Musukwa every other component of our economy is looking forward to the mining industry to prop up other sectors.

The country’s success is hinged on the doing well of mining, and only through a well coordinated industry, will more be reaped from this industry.

And only through frank and continued dialogue will the industry maintain and work magic for industry.

Enjoy the read!

Your feedback, comments and suggestions are most welcome. Remember to share with us on drewmara@gmail.com
Authorities orders firms to stop illegal mining

Government has directed companies without licences to stop mining of mineral products in the country.

Mooya Lumumba, Director of Mines, Ministry of Mines and Minerals Development, said all companies without valid mining licences, mineral processing licences and mineral trading permits must stop mining.

“It is the desire of the government that the ministry and other relevant agencies such as the Zambia Revenue Authority have full oversight of the mineral supply or value chain to ensure effective monitoring of the mineral production and exports,” said the authorities in a statement.

Mining, minerals processing and trading companies are required to report whatever they mine, import or export, he said.

He added that transaction in mineral sector without relevant licence or permit was illegal and punishable by law.

Lumumba said the ministry had engaged the country’s revenue agency to ensure that customs only allows authentic companies with relevant documents from all the relevant institutions to import or export any mineral products.

Banks must support the mining sector - Gabaraane

Stanbic Bank Zambia says mining is an expensive business that needs stable long-term support from the financial sector.

Speaking at the Mining Indaba recently Leina Gabaraane is Chief Executive of Stanbic Bank Zambia further said growing any business needs capital both for asset investment and day-to-day expenses. And the mining sector, by the nature of its size, needs that in much larger amounts than most.

“The finance sector thus plays a crucial role in ensuring that the mining sector has access to that much needed capital to take advantage of the upturn when it comes.”

He revealed that Stanbic Bank Zambia is committed to the mining sector, having invested and disbursed over US$3 billion over the past ten years.

“This is because we know that the mining sector is critical for the growth of the economy. Despite the global challenges the extractive industry has been facing, we are dedicated to supporting the sector because we believe that the industry remains an important foreign exchange earner for Zambia,” said Gabaraane.

Gabaraane wants to see a situation where the country continues to develop and more people are employed.

“As a bank, we pledge our commitment to helping where we can. We are looking at whether the mining sector is developing and growing. We are also looking at areas that we can further support for further growth.”

Meanwhile Gabaraane applauded that government has been proactive, dialoguing with the investors and advising them not to pull out or close mines which may leave Zambians jobless as a result.

“With the expected high production of minerals and prices rising, it is expected that the mines may even start to employ more workers.”

CEC aids disease burdened Kitwe family

As part of its broad social responsibility scheme - CEC has rendered support to the Sakala family of Kitwe's Kawarna Township, struck by a mysterious disease that has left four family members paralysed as well as speech and visually impaired.

The donation included two wheelchairs, assorted foodstuffs and groceries, monetary support as start-up capital for an income generating activity as well as support to two school-going children, all valued at K25,000.

The donation was an initiative of the female employees of CEC who led
the intervention in response to a recent media report that brought to the fore the plight of the family afflicted by a strange, debilitating and incurable disease.

Cooming with the 2018 International Women’s Day, the act of philanthropy was a practical application of the theme “Time is Now: Rural and urban activists transforming women’s lives” which called for enabling acts to help women claim their rights and realise their full potential.

The family, headed by their elderly mother, Regina Sakala, 74, has for more than 20 years had to deal with the effects of what seems to be an incurable disease that has claimed the lives of some family members including her husband.

Now, four of her children are affected. All are above the age of 30 and two of them once had thriving careers as teacher and secretary respectively before becoming bedridden.

Senior Manager Project Finance, Lizzie Muwowo, who led the team of CEC women in presenting the support, commended Sakala for her tenacity in providing and caring for her family under very difficult circumstances, describing her resilience as rare and inspiring.

“As women and mothers, we can easily empathise with you in this desperate situation because we know from experience that in any home, women bear the disease burden as the primary care givers to the sick” said Muwowo.

**Cummins launch new gensets**

Global power leader Cummins has introduced the new C450 D5, as part of its QSG12 series diesel gensets for the commercial and industrial markets.

The new product was pioneered at Middle East Electricity (MEE) 2018 in Dubai.

This latest product offers more power for less space by delivering a much higher power density and a more reliable power solution.

According to the company, the series is available from 400 kVA to 450 kVA, powered by a Cummins four-cycle, inline, six-cylinder dual-speed diesel engine offering more robust performance using less fuel.

Additional features include extended service intervals of 500 hours, a lower fuel consumption, and unaided cold-start capability at 12°C.

Also on display was the C1540 NSCC, the newest addition to the QSK60 gas-engine portfolio. This offers new customer options that make it a perfect fit for both independent power producers and combined heat and power applications. Supplying electrical efficiency of up to 43.8%, the upgraded model reduces total cost of ownership for its customers, and delivers world-class power efficiency.

The new 9.5 litre G-Drive Coolpac series was also showcased in the newly-released Cummins black colour. The 6LTA9.5-G1 G-Drive Coolpac model, available at 350 kVA, offers higher efficiency and dependability. With a 24-valve and a larger-flow injector design, this new model delivers one of the highest power-to-weight ratio in its class.

Cummins also displayed its Digital Master Control 8000, a fully-automatic, distributed logic controller for remote applications, making it easier for users to integrate and adapt their varying power needs. The new system can control diverse power sources such as solar, genset, and wind. With available remote access and monitoring, users can access the control system securely, and view up to 90 days of data logging anytime, anywhere.

Cummins also launched a virtual reality experience at MEE 2018, which allowed users to step inside a generator plant room and connect a complete power system.

**Lesotho’s high-value diamond recoveries surge**

British junior minor Gem Diamonds recently discovered a 169 carat, top white colour Type IIa diamond from its Letšeng Mine in Lesotho.

The mine is the highest dollar per carat kimberlite diamond mine in the world. This latest discovery is the seventh diamond of over 100 carats recovered at the mine, this year.

Gem Diamonds’ sixth diamond of over 100 carats recovered in 2018 is a 152 carat, top white colour Type IIa diamond from its Letšeng Mine.

**Miners, government head for a deadlock**

The Chamber of Mines has condemned the new law compelling mining companies and other bulk cargo firms to transport at least 30% of their freight by rail.

According to miners, the legislation is ‘economically inappropriate and unworkable’

Brian Mushimba, transport minister said the law was meant to revive the rail sector and reduce the cost of doing business since railway transport was cheaper than road haulage.

The Chamber, however said the rail infrastructure in the country’s Copperbelt was poor, lacked capacity and adequate security provision.

“Insufficient infrastructure exists to make this piece of legislation workable without imposing punitive costs onto Zambia’s principal means of generating revenue. It is economically inappropriate and unworkable,” said the Chamber in a communiqué.

“The Chamber calls for a review of this (legislation) and allow for more considered analysis of the effect on business and the national economy.”

Government is on record saying it agreed on the new policy with the Chamber and individual mining firms, but the Chamber says the industry’s position had been ignored.
Chamber of Mines has allayed reports by opposition politicians that mining industry activities are concealed from public scrutiny.

Percy Chanda, United Party for National Development (UPND) Chairperson for Mining recently said the mining industry operates in secrecy through private development agreements with the government.

Nathan Chishimba, Chamber of Mines President has dismissed UPND claims, urging the party to seek the truth first.

“Statements about the mining industry should be rooted in fact, and not populist emotion,” said Chishimba.

He said the industry is critical given its pivotal role in generating foreign earnings, employment and economic growth.

Chanda’s allegation says there are ‘secret’ Development Agreements between the industry and the government.

According to Chisimba, the Development Agreements were abrogated by the Zambian government nearly a decade ago, in 2008, and replaced by the Mines and Minerals Development Act.

“The current statutory framework is universally applied, in accordance with prevailing tax laws as enacted by Parliament from time to time.”

Responding to Chanda on the lack of information about the mineral value chain, and how resources from the industry are being used and optimized, Chishimba said much of this information is now publicly available, and all financial flows between the industry and its stakeholders (including government) are independently audited every year by the Zambia Extractive Industry Transparency Initiative (ZEITI).

“Moreover, there is an EU-funded, Mineral Production Monitoring Support Project that has considerably strengthened the capacity of the Ministry of Mines and Mineral Development to monitor mining and mineral production in the country.”

On employment of expatriates while Zambian artisans are unemployed, the Chamber said expatriates with specific skill-sets are employed under very strict requirements laid down in Zambian law, and constitute barely 5 percent of the industry workforce – one of the lowest proportions in Africa.

Chishimba said the mining industry and government departments had made significant and important improvements over the past decade in information sharing and transparency, and it is important that this be acknowledged.

“We look forward to the day when politicians find it useful to praise and support the industry, instead of ritually condemning it for short-term political gain.”

Politicians urged to support mining activities
Plans to raise funds for future expansion coupled with deliberate efforts to boost share ownership by Zambians in CEC saw the company list on the Lusaka Securities Exchange, ten years ago.

The company planned to spend $40.5 million on infrastructure upgrades over the next seven years after signing two loan facilities with Citi Bank Zambia and the Development Bank of Southern Africa (DBSA).

The equity was to also replace equipment installed nearly 50 years previously to meet the additional power demand from the mines it supplied.

These objectives were successfully met and today CEC celebrates 10 years on the LuSE bourse.

The private energy provider was listed on the LuSE in 21 January 2008, and has empowered many thousands of Zambians over the years through direct and indirect ownership of CEC’s shares.

Some 360 million shares in CEC have been traded at a value of ZMK 230 million.

According to CEC, the highest share price reached in ten years was ZMK1.46; with a weighted average 10-year share price of ZMK0.64.

Celebrating 10 years as the first and only privately-owned power utility listed on LuSE, CEC has delivered real benefits, some of which include:

- raising the profile of CEC and improving corporate governance, putting it on a path of being the largest regional power trader in Southern Africa Power Pool (SAPP);
- empowering citizens and contributing to the region’s securities exchange by widening the investor base and providing a liquidity event for investors who wanted to exit while at the same time contributing to the growth of the Zambian capital market; and
- creating a sense of ownership among Zambians, making CEC a truly indigenous Zambian company.

CEC became the first comprehensive electricity privatisation in sub-Saharan Africa when the two major investors in ZCCM Power Division sold off their controlling stake in the energy enterprise.

Today, CEC comprises a group of companies with a strong presence in Zambia and business links with the Democratic Republic of Congo.

The energy company stands out as a successful model for privately-owned and managed power utilities in Africa, gaining notoriety in 2009 as the first private power company to attain full membership of Southern Africa Power Pool (SAPP) which is a regional body made up largely of state-owned power utilities.

CEC’s prides itself on the contribution it has made in the lives of the people of Zambia.

“CEC has always placed good corporate citizenship at the centre of its being; making community investments that lead to permanent and positive transformation in local communities,” said the company.

The company plans to play an increasing role in Zambia’s electricity sector and is looking for opportunities to supply power to other industry categories.

“As new generation sources come online, CEC is in a strong position to adapt to changes in the mining sector; and will continue to run lean operations that endure in the boom and bust cycles, and provide value to its shareholders, local communities and the Zambian economy.”
Vedanta’s local unit, Konkola Copper Mines has announced intentions to bridge information and expectations gap that currently existing between the mine, the workers, the Unions, the local contractors and government.

Konkola Copper Mines has announced intentions to bridge information and expectations gap that currently existing between the mine, the workers, the Unions, the local contractors and government.

The company operates Copper mines in Chingola and Chililabombwe.

Steven Dinn, KCM Chief Executive Officer said that the meeting was a start of the new era and that the mine management will work on what they are not doing very well as they should.

He committed that KCM will work at closing all the actions that had been agreed during the meeting with the high powered Government team.

New Mines Minister, Richard Musukwa stated that KCM is expected to normalize its relations with its workers and the unions.

He stated that KCM should also look at its other mines at Nkana and Nampundwe to ensure a win-win situation.

“We want to see KCM increase production and contribute to Zambia’s economy effectively,” said Musukwa.

The Mines Minister also stated that KCM should endeavor to use locally trained expertise, some of whom are managing large mining operations even in foreign countries.

“There is this issue of foreign workers being issued with permits even for jobs that Zambians can do” Musukwa said KCM should also deliberately create a mechanism to award critical contracts to local suppliers and contractors.

He said that government has noted that all key contracts are given to foreign contractors and suppliers at the expense of local Zambians who are equally capable of doing the jobs.

KCM has recently come under heavy scrutiny and criticism from its local workforce, the mine workers unions and local contractors following the mines decision to outsource some the key mining activities to foreign contractors at the expense of the locals.

The unions and workers have resisted the move citing the fact that the new mine contractors conditions of service are inferior to the current one.

The workforce have asked KCM to rather declare them redundant and pay them off their terminal benefits rather than transfer them to the new contractors, whom they fear may even fail to pay off their accrued benefits.
40 YRS OF ENGINEERING EXCELLENCE

C.P. Engineering Ltd. a company formed in 1972 and was originally founded by an Italian. It was later purchased in 1975 by the current owners making the Company 100% Zambian owned. Over a period of almost forty years, C.P. Engineering Ltd has grown in size and now has a staff of over thirty eight employees and is sub-divided into four different sections, namely: The Machine Shop, Boiler Shop, Bulk Storage Warehouse and a Retail outlet.

The Company was originally started with only a few machines, but over the years has built a healthy fleet of almost thirty different pieces of equipment which includes lathes, milling, drilling, boring, power saws, welding, pressings, rolling, guillotine and threading machines. All four sections of the Company are spread over an area of sixty five thousand square feet of space with a manager in each section.

THE BOILER SHOP

The boiler shop is involved in fabrication of tanks, repairs and rebuilding axles, repairing dumper truck bodies, bulldozer and excavator buckets, customized containers, and other items as per drawings. Trolleys are also manufactured and distributed to other hardware stores.

Most of the staff have been with the Company for more than ten years and are experienced in various aspects of engineering. C.P. Engineering Ltd has three full time engineers with more than fifty years of experience combined. Over the past years the Company has serviced several different industries such as textile, food & beverage, transport, construction and mining. With the advent of numerous new mines and several new major construction projects, the company is deliberately focusing more on servicing these sectors.

FASTENERS

The third section deals with wide range of fasteners. C.P. Engineering Ltd in recent years has become the country’s largest stockists of numerous types of bolts, nuts, washers, threaded bars, screws, and studs in mild steel, high tensile steel and stainless steel. No other dealer in the country carries as much variety of fasteners.

RETAIL SHOP

Lastly, the fourth section of the Company is the Shop. The storefront has been C.P. Engineering Ltd’s latest expansion to expose the range of fasteners to individuals and other Companies. Additionally, a lot other hardware items related to fasteners have been introduced such as Ring, Combination and Open ended spanners, Impact Wrenches, Screw Drivers, Torque Wrenches and Vices. Pipe Wrenches, Allen keys and complete mechanics, fitters and electrician tool boxes. Items such as welding machines, boiler shop supplies, machine shop tooling heavy duty jacks, shackles, and numerous other supplies can be found. C.P. Engineering Ltd is an Authorized Exclusive Dealer of High Quality world renowned HEYCO and HYTECH tools of Germany who are also the principle suppliers of all major tools to Mercedes Benz, Audi, Volvo, VW, and MAN trucks of Europe.

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C. P. ENGINEERING LTD.
New economic transformation rapidly hits Zambia
...the development is supported by fresh copper mines

North-Western province is transforming from a once remote province with very little economic activity into a thriving commercial hub that generates wealth, employment and tax revenue that is the envy of the rest of the country.

“Within barely a decade, North-Western Province has seen the creation of not just one new mine, but three – Barrick Lumwana, as well as Kansanshi and Sentinel mines, both majority-owned by First Quantum Minerals,” said the latest report from the Chamber of Mines.

“When the entire associated infrastructure is included, it presents an investment of some $7 billion. That is the single-largest round of direct fixed investment of recent years that a Zambian province has seen in so short a space of time,” adds the report.

The resulting mining boom hit the area – particularly Solwezi – with the force of an express train. Suddenly, there was economic opportunity, jobs and spending power.

Businesses sprang up like mushrooms to meet the new consumer demand, highlights the report.

The population swelled, drawn by the lure of employment and opportunity. Hotels were booked out for months at a time.

FQM’s Kansanshi Mine in Solwezi could no longer find homes for all its employees, so they built an entire new neighbourhood – Kabitaka – at a cost of $100 million.

However, the rampant growth wasn’t without its problems.

“The surging population put pressure on public services such as water road infrastructure, and health and education facilities,” the report says.

In response to the pressure created by the new mining activity, Kansanshi and Lumwana embarked on a major multimillion-dollar infrastructural drive, building houses, clinics, roads, classrooms – and even upgrading Solwezi airport.

It was partly to avoid this kind of chaotic development that FQM decided to start with a clean slate when building the town of Kalumbila to support their new Sentinel Mine, which was scheduled to start production in 2015.

The town was designed by an international urban-design consultancy, required an investment of $200 million, and boasts an airport; proper infrastructure; water, sewerage and street lighting; shops, businesses and leisure facilities; schools and medical facilities.

Kalumbila has attracted private investment, the most recent example of which is a $40 million Chilean manufacturing plant scheduled to open in 2018, and which will produce mill-balls for Zambian and international mines.

“The town’s long-term ambition is to become economically self-sustaining, so that it doesn’t depend on Sentinel Mine for its existence,” the report says.

The existence of three modern, world-class mines has had a profound economic effect on the livelihoods of ordinary people, creating employment and increasing disposable income.

Massive supplier spending of between $1 billion and $2 billion a year sustains numerous businesses and their employees, not just in the province, but in the Copperbelt and Lusaka too; more than $100 million of supplier spend ends up in Solwezi alone.

The report says that North-Western Province can continue to grow and expand its mining and commercial activities, as long as there is an attractive enabling environment, and various challenges facing Zambian local businesses – high costs of credit, lack of skills and high tax rates) are addressed.

“Taken in the right spirit, [this] can be a useful aid for Zambia’s policymakers in trying to understand the link between investment and economic development, and how to deal with both its successes and challenges,” the report concludes.
Kagem Mine has sold a total of US$10.8 million at the company’s auction in India recently.

According to the company proceeds from will be fully repatriated, with all royalties due paid on the full sales prices achieved at the auction.

The auction was of predominantly commercial quality rough emeralds mined by Kagem Mining Ltd - believed to be the world’s single largest producing emerald mine.

Government authorities monitored the auction which took place in the Indian city of Jaipur, the main global centre for emerald trading.

Though bidding at the auction was thinner than usual, Kagem attributes the development to several customers noting decreased availability of financing for gemstones in India due to allegations surrounding fraudulent bank lending to Nirav Modi and Gitanjali, two leading diamond and jewellery groups in India.

However, Kagem remained optimistic citing that its next auction scheduled for Lusaka later in the year should be of predominantly higher quality emeralds.

"We believe this is the first time a coloured gemstone mine has transparently attained this milestone with publicly available data," said Sean Gilbertson Gemfields Chief Executive Officer.

Government’s share of these revenues – in the form of royalties, corporation tax and dividends – exceeds US$105 million, or 27% of the revenue generated, a figure which also solidly exceeds Kagem’s aggregate net profits over the same period.

The auction saw 31 companies placing bids, generating total revenues of US$10.8 million with an overall average value of US$3.05 per carat.

Robust demand resulted in 95% of the offered carats being sold (or 90% of the number of lots offered).

Kagem Mine developers Gemfields is a world leading supplier of responsibly sourced coloured gemstones.

The company’s 27 auctions of emeralds and beryl mined at Kagem since July 2009 have generated US$506 million in total revenues.

Gemfields has developed a proprietary grading system and a pioneering auction and trading platform to provide a consistent supply of coloured gemstones to downstream markets, a key component of the company’s business model and has played an important role in the growth of the global coloured gemstone sector.

Slow start for Kagem’s emerald auction
Up-skilling workforce through useful training courses is one of the long-recognised ways to ensure productivity remains elevated. WearCheck says the reliability solutions arena is a prime example of how well-trained workers can have a positive impact on an industrial operation by maximising the investment in a good condition monitoring programme.

As mechanised operations become increasingly complex, and the smooth running of components is increasingly critical to the general production and output in industry, so the need for ongoing employee education becomes more important.

Condition monitoring specialists WearCheck have run popular skills training courses for their customers for over 20 years.

The company says training material assists staff in various positions within the maintenance teams to ensure that the monitoring and upkeep of components is conducted as efficiently as possible.

WearCheck employs reliability solutions services such as used oil analysis, thermal imaging, vibration monitoring, balancing, laser alignment and others, to monitor and maintain machinery at its optimum yield.

Customers with well-trained maintenance staff can supply better samples and data to WearCheck, boosting the integrity of the test results and thus gaining optimum benefit from their condition monitoring programme.

WearCheck’s training courses cover accurate oil analysis report interpretation, correct sample taking, pre-planned maintenance schedules and good lubricant management.

Training courses are conducted around South Africa as well as in other regions where there are WearCheck customers.

The courses are tailored and targeted at a range of levels within an operation, from factory floor to senior management.

Over the 40 years in business, WearCheck has compiled a database of sample diagnoses and wear trends, adding 600 000 new sample results annually to the data. Much of the training course material draws on this database, with the added benefit that WearCheck processes samples from a range of OEMs.

WearCheck also offers two more on-site courses - WearCheck Practical and WearCheck Customised.

The company says all courses can be presented at the customer’s premises for a minimum of seven delegates.

Oil analysis training courses have targeted areas such as Bloemfontein, Cape Town, Kimberley, Makopane, Nelspruit, Port Elizabeth, Rustenburg, Steelpoort, Botswana, Namibia, Tanzania (Mwanza), Zambia (Kitwe) – in fact, anywhere in the world.
De Beers launch Chinese course manual

De Beers group subsidiary International Institute of Diamond Grading & Research (IIDGR) has announced plans to launch two of its diamond education courses in simplified Chinese.

The development is expected to help students in one of the largest and fastest growing markets for diamond jewellery to enhance their knowledge of the industry.

“We’ve seen a lot of interest in our education services since they were launched last year, so translating these courses into Simplified Chinese was a logical next step to expand our offering. “We see great potential for flexible and fully comprehensive education courses for those already working in the diamond industry in China, or who may wish to in the future,” said Jodine Perrin, Director of Education, IIDGR.

According to the company, the online Diamond Foundation Course, which was launched last year and is the industry’s first to cover the full diamond pipeline, will be available in simplified Chinese from starting March, with the Polished Diamond Grading Course to be translated later this year.

The courses have been designed to support flexible learning that minimises the impact on students’ daily lives and allows for personalisation of the learning experience.

On the other hand, the Diamond Foundation Course is a completely online course, while the Polished Diamond Grading Course is a two-part course that involves distant learning via textbooks and online testing in the first instance, followed by a one week lab-based element.

Both courses will be available to those already involved in the diamond industry – whether at the retail level or other stages of the value chain – as well as anyone wishing to further their knowledge of diamonds and the diamond industry in general.

Kendall said providing high-quality learning experiences, backed by the unrivalled diamond knowledge and expertise of De Beers Group, is an important priority for IIDGR.

“We are delighted to be launching our education services to a new audience in one of the world’s largest consumer markets for diamonds.”
As countries in the southern Africa bloc continue to compete for foreign direct investment, DRC government met with the country’s major mining houses to negotiate terms that would be beneficial to all stakeholders.

The dialogue led to signing of the revised Mining Code into legislation by the DRC President Joseph Kabila.

“I believe the demand for cobalt, and copper to a lesser extent, will override the financial impacts of the revised DRC Mining Code,” says Laura Cornish, editor of the mining trade journal Mining Review Africa.

“The electric vehicle and battery markets are growing and require cobalt to operate. Profits due to higher cobalt prices should lessen the impact of higher taxes,” she adds.

However the mining industry has not fully embraced code.

“The Mining Code in essence has increased taxes on the minerals mined and processed in the DRC” says Laura, “and the code will likely impose higher royalties on cobalt, a critical metal for electric vehicles – a market that is growing exponentially every year.

Laura said royalties on cobalt could rise to 10 percent if it is determined ‘strategic’ by the government, up from 2 percent.

“I understand that the country would like to realise greater revenue generation from its mining industry and copper and cobalt in particular and I appreciate this need, but I believe it would have been better for government to engage more with the industry to find a resolution that benefits all, including the investors.”

She continues: “The mining industry has not fully embraced the revised Mining Code – primarily because the government did not engage with them during the revision stages. Naturally mining companies would be opposed to legislation that impacts on their profits and shareholder returns without forewarning.”

Meanwhile at the recent Mining Indaba in Cape Town in February, Randgold Resources Chief Executive Officer, Mark Bristow, openly stated that the revised DRC mining code was not beneficial to investors and stakeholders.

“When we set out in 2014 to negotiate the code” he said at the time, “we did have constructive engagements and we made progress and we reached agreement on just about every contentious issue, but the code that was presented to Parliament the last time was not that draft.”

"We need to have a transparent platform with the intention of finding the most beneficial code for the DRC.”

The Randgold Resources CEO said that through the company’s Kibali gold mine, the company had invested some $3-billion into the economy, its surrounding communities and local skills development and it would continue to do so for its long lifespan.

“We need more investment not less investment, we need big investors because it is going to take tens of billions of dollars to bring this great country to its rightful place, both in Africa and in the world,” said Bristow.
Global metals exploration anticipated to rise 20% in 2018

"Despite significant market volatility, the generally positive trend in metals prices has continued in early 2018. Global spending on the search for nonferrous metals rose to an estimated US$8.4 billion in 2017, compared with US$7.3 billion in 2016, representing the first annual increase in exploration spending after four consecutive years of declining investment in this area.

This is according to the World Exploration Trends (WET) report from S&P Global Market Intelligence, released in conjunction with this year’s Prospectors & Developers Association of Canada (PDAC) International Convention.

S&P Global Market Intelligence predicts that exploration efforts will continue to expand over the course of this year.

Mark Ferguson, Associate Research Director at S&P Global Market Intelligence, says: “Improved equity market support for explorers allowed many companies to launch or resume drill programs on their most promising projects.

“Despite significant market volatility, the generally positive trend in metals prices has continued in early 2018; we therefore expect the global exploration budget for 2018 to increase by a further 15 percent to 20% year-over-year.”

The report says the industry indicates signs of life after four years of depressed exploration spending, the mining industry upped aggregate nonferrous exploration budget to US$7.95 billion by surveyed companies — a 14 percent increase over 2016.

In addition, reflects funding challenges faced by some junior companies early in the year, the number of explorers with spending plans declined slightly by 3 percent year-over-year to 1,535 companies.

Producers restrict exploration: major miners (revenues >US$1 billion) continue to allocate only a small proportion of their revenues to exploration efforts. Riskier exploration remains relatively unattractive.

Meanwhile, Canada, Australia and U.S continue to lead exploration spending, with allocations totalling US$5.55 billion.

The top 10 countries accounted for 70% of the US$7.95 billion global surveyed total, gold led the way to a higher global budget in 2017. Battery metals exploration surged with lithium exploration allocations in 2017 more than doubled year-over-year while cobalt-focused exploration also increased strongly.

On the other hand, the exploration sector health improves: S&P Global Market Intelligence’s measure of exploration activity, the Pipeline Activity Index, jumped to 87 in Q4 from 77 in Q3, the highest since Q1 2013, when the recent downturn was just beginning.

The S&P Global Market Intelligence Pipeline Activity Index incorporates data on the number of projects announcing significant drill results, exploration financings, initial resources and positive project milestones.
Allied Steelrode recently announced that the fluctuating primary pricing threatens the mettle of South Africa's steel industry.

According to industry sources, much of this can be attributed to the extreme volatility of the primary pricing.

"This level of volatility poses an enormous and very urgent challenge to the entire sector," said Warne Rippon, Executive Director of steel major Allied Steelrode.

The company said the price fluctuations result in a knock-on effect which is very hard to contend with.

"If we are experiencing this, then our downstream customers must be even more adversely affected," Rippon remarked.

"What the market desperately needs at this point is a more stable and reality-based pricing system going forward. Quoting customers accurately - even three months ahead - is extremely difficult when you have this level of pricing volatility to contend with," he adds.

Until March 2006, the primary steel producer used import parity pricing – where the price of steel was set based on what it would have cost if the product had been imported – as is common in most global steel markets today.

In March 2006, however, an international ‘basket of prices’ was introduced, reportedly to enhance transparency in the pricing system and allow for the introduction of a major rebate system.

The ‘pricing basket’ was calculated by taking an average of domestic mill prices (excluding freight), for steel in China, Germany, Russia and the US.

However, the bottom line is that for Allied Steelrode and its downstream customers the effect of price fluctuations is potentially severe.

"Unfortunately, if there is not some rationalisation of pricing levels, we – along with many other companies in the industry – will be forced to import more of our steel requirements," said Rippon.

"At Allied Steelrode, an unwavering dedication to customer service and quality, and the loyalty of our valued customers, is the reason that we have still flourished in what is actually a very difficult market.

These key elements, combined with our adherence to a bold strategy of making substantial investments in technology, in order to create value-driven demand, and to position ourselves for market recovery – such as the purchase of our first and second stretcher levellers – has ensured our continued success," Rippon explains.

Rippon also raises the point that many major decisions about the South African steel sector are made overseas.

"These stakeholders are removed from the reality of doing business locally, and also do not have the interests of the local steel industry at heart."

Rippon furthermore points out that pricing protection seems to only be between the primary producer and the government, and does not extend to protect or assist the downstream industry.

"The current predicament that the South African steel industry is in – caused by this pricing issue - ironically goes against the whole steel industry value-adding product paradigm – not to mention the ‘proudly South African’ manufacturing initiative."

"Ultimately this pricing issue is not encouraging - nor indeed fostering - local steel sector growth. If the local industry ultimately flounders as a result of the pricing volatility and South African manufacturers cannot produce locally, then they cannot successfully export either - and the economy as a whole loses out," he said.
WearCheck the certified Mobius training centre runs Mobius courses on request from customers, on-site at the customer’s premises, anywhere in Africa apart from SA, DRC and Kenya.

The full Mobius course includes compulsory six month practical training sessions.

According to the course structure, participants are guided by WearCheck expertise that has been gained through the successful implementation of condition monitoring programmes tailored to meet the specific needs of operating, engineering and maintenance departments across a range of industries.

Through these practical sessions, the skills of the technicians are developed in order to progress to the next level.

The Mobius Institute is a worldwide provider of education in reliability improvement, condition monitoring and precision maintenance, to industrial plant managers, reliability engineers and condition monitoring technicians.

The training facilitates the successful implementation by plants, of reliability improvement programmes through delivery of more easily understandable and comprehensive training.

This includes reliability, alignment, balancing and vibration analysis via various education programmes.

The Mobius Institute Board of Certification (MIBoC) is ISO/IEC 17024 and ISO 18436 accredited, providing globally-recognised certification to category I-IV vibration analysts in accordance with ISO 18436-1 and 18436-2.

Recently, Dennis Swanepoel of WearCheck’s reliability solutions division made history when he became the very first Master Vibration Analyst in South Africa, after meeting all certification requirements, and passing his CAT IV exam through the world-renowned Mobius Institute.

And in the latest CAT III course run by WearCheck, all five delegates from Namibia and South Africa obtained a pass rate of 100%.

Mobius courses are run by WearCheck anywhere, any date, on demand.
As Mozambique mining industry continues to register growth, WorleyParsons continues to expand its footprint in the country. WorleyParsons’ activities in Mozambique are showing a positive trajectory compared to East Africa’s emerging and significant oil and gas regions.

Over the past recent years, the company’s presence in the country has transformed from a project support office into a standalone business with the head office in Maputo and a branch in Pemba, Cabo Delgado.

For 13 years, WorleyParsons has provided engineering and project management services to many of Mozambique’s largest developments from ROMPCO’s 865 km, 26” gas pipeline from Temane gas fields to Sasol’s Gas-To-Liquids facility in Secunda, to Vale/CDN’s Railway Corridor linking the Moatize coal basin to Nacala Port some 900 km away.

The Nacala Railway Corridor in particular is a flagship project for WorleyParsons Mozambique Lda that has enabled the company to build a strong team and reputation in one of Africa’s fastest growing economies.

At the peak of the Nacala rail construction in 2015, WorleyParsons Mozambique Lda had 145 professionals in-country.

Other projects that WorleyParsons has contributed to is the development of the Anadarko Area 1 Gas Field and Liquefied Natural Gas (LNG) plant including early infrastructure master planning, design of the resettlement village, pre-FEED (front end engineering design) and FEED oversight of the subsea infrastructure.

WorleyParsons also designed the subsea risers for ENI’s Coral field supplying gas for their Floating LNG facility, the first LNG project in Mozambique to reach financial close.

Furthermore, WorleyParsons has provided a variety of planning and construction supervision services for the completion of Syrah Resources’ Balama Graphite mine, the largest flake graphite mine in the world today.

WorleyParsons’ leading electricity sector expertise has been successfully applied on the Kuvaninga 40MW Gas Engine Power Plant, recently commissioned in Mozambique.

The Mozambique operation is well supported by WorleyParsons’ project delivery hub in Johannesburg, South Africa.

WorleyParsons Mozambique Lda also has direct access to specialists from WorleyParsons’ global Centres of Excellence, enabling the local operations to provide a full range of engineering, procurement, and project and construction management services in Mozambique.

The company works with its customers across all stages of the asset lifecycle from the assessment of potential project opportunities to the operating, maintenance and improvement of assets within the hydrocarbons; power; minerals, metals, and chemicals; and infrastructure and environment sectors.

The project delivery company is committed to building a strong, sustainable engineering and project services business in Mozambique.

“We believe that building local capacity and capabilities is the right thing to do – that it makes business sense when it is done in a sustainable manner,” says Ryan Froude, WorleyParsons’ Country Director for Mozambique.

WorleyParsons Mozambique presently has a teaming agreement with Consultec, a wholly owned Mozambican engineering consulting company.

WorleyParsons and Consultec are successfully working together on projects in hydrocarbons, mining, power and related infrastructure in Mozambique.

The WorleyParsons team has also been actively involved in a number of corporate social activities to uplift the lives of the Mozambican people living in the immediate vicinity of the projects.

These social activities coupled with a ‘Localisation Training and Development Programme’ have ensured that WorleyParsons continues to leave a legacy that promotes the well-being of all Mozambicans.
Automation, data mining and new technologies promise to maximize production output, reduce operating costs, and increase sustainability over the next few years.

In responding to these diverse needs, Metso has introduced the new MHC™ Series Hydrocyclone which provides a wide range of grinding circuit classification duties, ensuring maximum uptime and recovery to customers.

“We identified a gap in our grinding system offering, and with the addition of our cyclone range, we are now in a good position to offer a complete grinding solution with the requisite process guarantee from one source,” said Charles Ntsele, General Manager for Capital Equipment Sales, Africa and Middle East.

Designed to optimize mining applications, the new MHC™ Series represents the next generation of hydrocyclones.

Tested rigorously in the field with successful results, the product offers significant advantages over previously available technologies.

The new range focuses on enhanced process performance, superior wear component design, and improved ease of maintenance.

“We believe that this latest addition to Metso’s product portfolio will further enhance our ability to offer superior solutions that have a positive impact on our customer’s bottom line,” adds Ntsele.

Meanwhile the internal geometry of the MHC™ series has been developed to promote smooth flow of the material from the inlet into the hydrocyclone, minimizing liner wear and increasing throughput.

The unique single component conical section eliminates the need for multiple conical section housing and liner parts, thereby increasing wear life and keeping downtime to a minimum.

Metso’s improved manifold design ensures accurate feed distribution including overflow and underflow collection from multiple hydrocyclones operating in parallel.

The new product improves Metso’s existing equipment offering, which now covers the supply of entire grinding circuit systems to our customers.

MHC™ Series is available in seven different sizes with diameter ranging from 100 mm to 800 mm. Each size has a range of vortex finder and apex inserts to fine tune the classification performance.

Metso’s world-class wet fine classification technologies help to increase efficiency, capacity and profitability in customer operations.

This next generation technology will surely allow the mineral processing industry to reach new heights.

Exceptional separation efficiency for optimized performance
New calibrator generates accurate pressure for single or multiple tests and automates the calibration process.

Pressure instrument calibration is a significant part of the maintenance workload in process plants that requires a high level of accuracy and repeatability.

Comtest is offering the latest Fluke 729 Automatic Pressure Calibrator - simplifying the calibration process by automating pumping to the precise test pressure, improving calibration integrity by compensating for minor leaks, and automatically documenting the pressure calibration process to meet compliance and regulatory requirements.

With the rugged, portable 729, technicians simply input a target pressure and the calibrator automatically pumps to the desired set-point while the internal fine adjustment control stabilizes the pressure at the requested value, delivering more accurate results and speeding the calibration process.

**Fluke 729 features:**

- Automatic pressure generation and control for multiple tests to 300 psi, (20 bar, 2 MPa). Fill in a test template and the 729 automatically pumps to and documents a multiple-point pressure calibration test.
- Easy calibration documentation using defined templates for transmitters and switches. Input the starting and ending test pressures and number of test points and the calibrator documents the applied pressure, measured mA, and percentage error for each test point. The bright color graphical display flags out of tolerance test results in red.
- HART communication enabling mA output trim, trim to applied values, and pressure zero trimming of HART pressure transmitters. Technicians can also perform light configuration tasks such as changing a transmitter tag, measurement units, and ranging.
- Measurement of mA signals on transmitter outputs and sourcing and simulation of mA signals for testing I/Ps and other mA loop devices. It includes a 24V loop power supply for testing and powering transmitters in standalone tests disconnected from the control system.
- As part of the Fluke Connect® reliability platform, the 729 allows technicians to remotely monitor calibrations using the Fluke Connect mobile app as well as manage, store, and share pressure measurements and logging events.

Documented calibration results can be uploaded to the included DPCTrack2™ Calibration Management Software, to easily manage instrumentation, create schedule tests and reports, and organise calibration data.
Deadweight testers are accepted as the most accurate method for the calibration of electronic or mechanical pressure measuring devices.

Instrotech is now offering the LR-Cal LDW series of deadweight testers available in the ranges from 10 bar up to 1400 bar.

The direct measurement of pressure ensures high accuracies and long term stability.

These testers are used extensively in calibration laboratories in industry, standards institutes and research facilities.

The LDW series are ideally suited to on-site use as well as for service and maintenance purposes.

However, customized assembly allows set up of a complete, compact system consisting of a universal basement and the measuring systems piston or cylinder units.

The high quality piston or cylinder units are manufactured from tungsten carbide which is known for its small temperature co-efficiency.

Fast and uncomplicated changes of the measuring range are possible using a flat spanner.

In order to generate the individual test points, the piston or cylinder system is weighted with mass loads which are also calibrated and specially adapted to the required application.

The basement is fitted with the corresponding system, depending on the measuring range of the device under test. The pressure is set via an integrated pump or if an external pressure supply is available, via control valves (pneumatic models).

For fine adjustment, an adjustable volume with precision spindle is available. The weight applied is proportional to the desired pressure and provided by using optimally graduated weights.

As soon as the measuring system reaches equilibrium, there is a balance of forces between pressure and wheel weights.

Due to the excellent quality of the system this pressure remains stable over several minutes, so that, for instance, adjustments of the device under test can be carried out without any problems.
Robor continues to find a way

Remaining at the forefront of technology and product development is paramount for any company who considers themselves amongst market leaders and Robor take this aspect of business very seriously. Over the past five years, the company’s capital expenditure has been extensive.

“The most recently approved, being the biggest capex in the history of Robor, was for the replacement of two of our older steel mills with a new steel mill of the latest technology that was designed in conjunction with some of the leading equipment builders from around the globe,” said the company.

Robor says the fully automated, state of the art mill, is the most advanced ø219 pipe line in the world, capable of changing rolls in 30 minutes, with the aid of a fully automated robotic tool changing system, the first of its kind on the African continent.

“This world class mill has now been fully commissioned and takes pride of place at our 250 000 m² Elandsfontein site in Gauteng, South Africa.”

The mill is complemented by extensive value add, project and fabrication operations with the capability to handle a full range of customer requirements in the light and medium fabrication range.

Robor undertakes the estimating and turnkey supply to site (excluding installation) of complex and demanding water reticulation and structural steel projects.

With multiple projects each having been managed concurrently, Robor’s fully integrated supply chain ensures excellent turnaround times from estimating through procurement, manufacturing and logistics to meet project deliverables.

Robor is at the forefront of the African steel industry and having developed a fully integrated steel processing facility of world class standards we are the largest supplier of longitudinally welded steel tube and pipe in Southern Africa.

“Our range of value added services includes but is not limited to: hot dip galvanizing for corrosion protection, pipe and tube cutting (2D and 3D), punching, drilling, coatings and linings, pressure testing, welding (robotic, stick and submerged arc), cutting, wrapping, painting, packing, fabrication of certain components and ultrasonic testing.”

ACQUISITIONS AND CELEBRATIONS

The Tricom Structures business affords Robor the opportunity to supply into various telecommunication and power distribution systems and has augmented our pipe structures capabilities with traditional steels.

In 2017 as an equal shareholder of Mine Support Products (MSP) manufacturer of the tube Rocprop product range for underground mine roof support, we purchased the 50% balance of shares from DCD Dorbyl to become the sole owner of MSP 2017 has also seen Robor enter into a joint venture with Aegion – United Pipeline Systems, a multinational American company that provide pipeline solutions.

Through the various business acquisitions, we have grown from a commodity steel and pipe company by expanding our offering and our teams continue working hard to deliver on our vision of a solutions driven company, to enable more focused engineering, faster market penetration and an outstanding customer experience.
Copper boom is back, will Zambia benefit?

Some of the critical issues that the Zambian government must act on include, first, the adjustment of the balance of power between government and mining companies.

By CLAUDE KABEMBA & EDWARD LANGE*

Today, the prices of copper and cobalt, the minerals in which Zambia has the largest stake, have risen at an unprecedented high rate of $7,000 and $80,000 per tonne respectively.

This increase in price of these two minerals is a great opportunity for the economy of Zambia. The big question, therefore, is whether Zambia is prepared to draw maximum benefits from the new boom?

Zambia’s entire economy is dependent on copper. It has been like this since the country attained independence in October 1964. Copper defines Zambia. Since privatisation in early 90s, the mining sector has attracted Canadian, Chinese, Indian, Australian and American mining companies.

At some stage, Zambia was the biggest African producer of copper until the Democratic Republic of the Congo (DRC) overtook it in 2013.

Still, Zambians have consistently monitored the health of the mining sector, knowing its contribution to the overall economy.

Thus, when the price of copper goes up, hopes are raised that lives will change and when the price goes down, fears abound of operations scaling down, leading to massive job losses and a decline in contributions to the fiscus.

That there already is in place a problematic and inefficient Corporate Social Responsibility (CSR) framework governing the operations of mining companies in affected communities, these fears are legitimate.

By all accounts, the mining sector should have been a saviour of the country’s economy. But, the reality is that whether the price of resources increase or decrease, the people do not benefit.

Many Zambians, including the president, Edgar Chagwa Lungu, echo this view.
The entire mining sector is structured in such a way that mining companies always take the lion share of profits, leaving behind poor communities and massive environmental damage that mostly affects water and soil quality.

Evidence abounds of polluted streams and rivers in the Copperbelt, all polluted by various mining activities.

Today, the prices of copper and cobalt, the minerals in which Zambia has the largest stake, have risen at an unprecedented high rate of $7,000 and $80,000 per tonne respectively.

This increase in price of these two minerals is a great opportunity for the economy of Zambia. The big question, therefore, is whether Zambia is prepared to draw maximum benefits from the new boom?

Recently, ourselves, joined by other colleagues, spent a week in Zambia talking to different stakeholders in Lusaka, Ndola and Solwezi.

We met with the Minister of Mines and Minerals Development, Richard Musukwa, MP. He is clear on the priority of his government, which he describes as ensuring that mining activities benefit the people of Zambia, and the government, he stresses, will not sleep until this happens.

To the ears of Zambian civil society, Musukwa’s words are hollow and point to the empty sloganizing they have become accustomed to. For some civil society organisations in Zambia, therefore, it is quite clear that their government does not have the capacity, let alone political will to turn the resource curse afflicting their country into a blessing.

A prevailing view among these civil society organisations is that multinational companies are too powerful for the Zambian government to reign in and demand transparency and accountability. In response to this criticism, the government of Zambia has constituted a special committee to look into the complaints by Zambians, broadly, that the mining industry is not benefiting the country, as it should.

While people appreciate the government move, critics argue that the reasons why Zambia is not benefiting are known and the government must simply act to reverse the situation.

Some of the critical issues that the Zambian government must act on include, first, the adjustment of the balance of power between government and mining companies.

There is a strong perception that there is an asymmetrical power imbalance, which favours mining companies.

They get whatever they want, including rejecting any adjustment government wants to introduce in the mining framework. In many instances, companies use threats of withdrawal of their investment to force the government to back-off from any change that will reduce companies’ profits.

Regrettably, this is a manifestation of a government that does not have a vision of what it wants to do with its minerals.

Any government with a vision, will not be bullied to the point of abandoning what it believes in.

This situation has slowly started to erode confidence in government, especially from mining communities who suffer from mining activities through displacement, pollution and lack of access to sustainable economic opportunities.

Second, the government must ensure it shares in the large profits that are now being made by mining companies with the increase of copper price. Mining Companies have been quite about the price increase.

They are quietly enjoying the benefits. They are not prepared to open the issues such as payment of a windfall tax, increase of workers’ salaries and increase of their Corporate Social Investment, benefits of which are quickly shelved when price decrease are reported. To prevent the unpredictability, which comes with price fluctuations, the Zambian government must introduce a clause guarding the stability of the fiscal regime in country’s mining law.

Third, we strongly feel there is need for the government to develop a system that will segregate aggregate the production figure especially of Cobalt and Copper. Cobalt is a by-product of Copper. Although Zambia it is not a big cobalt producer, it is difficult to know how much Cobalt companies produce and export.

There is a rush for cobalt currently given constrained supply and strong demand for lithium batteries, needed for electric cars.

The price of cobalt, if one considers the projection, which car manufacturers are, making, will not come down soon; unless there is over production but this is unlikely.

Currently the DRC is the world’s biggest producer. Combined, DRC and Zambia hold 57% of world cobalt reserves. Last year the DRC produced 68,000 tonnes of cobalt.

With the cobalt rush and the price increase, the DRC will certainly increase its revenues. But, Zambia’s cobalt production figures are not publicly available.

It is necessary for government to ensure mining companies are compelled to divulge the correct figures of cobalt production and pay what is due to government. The DRC has just made cobalt a strategic mineral and has pushed its royalty rate from 2.5% to 10% in the new Mining Code signed last week by president Kabila.

Fourth, the government must strengthen its revenue collection capacity. The low capacity or lack of it to collect the right and correct taxes from mining companies is due to lack of a clear and efficient system that allow institutions assigned to carry out such functions to execute them with efficiency.

Fifth, the Zambian government must monitor and evaluate the CSR of mining companies to ensure that their contribution supports the transformation of Zambian society.

Government must know that it is not a core goal of mining that growth and profit it creates will either reach or enrich indigent communities.

Companies claim to be investing millions of dollars in communities but it is not clear where these investments are made because, for us who visit mining communities continuously, we find them poorer than the last time. In reality, mining companies perpetuate poverty and impoverish communities.

In Zambia, mining companies are making huge profit but their activities are not shifting structures of poverty.

The failure to channel profits into the development of those affected by mining, reveals a perennial practice of exploitation that is hundreds of years old.

Companies are increasing their production for copper to benefit from the high price.

It seems that Zambian government is not prepared to draw maximum benefit from this increase. Zambia has been one of the most peaceful and stable countries on the continent. Sadly, this stability has not translated in a better life for the Zambian people.

It is clear from the Zambian case that mineral resources endowment can create as much suffering as it can create wealth.

The Zambian state must assert its sovereignty over the country’s minerals now before it is too late.

*Claude Kabemba and Edward Lange are, respectively, Southern Africa Resource Watch Director and Zambian Co-ordinator.
TAKRAF Group’s subsidiary TAKRAF Africa recently showcased advanced range of Tenova air environmental technologies at various client symposium in South America.

The events were held in three cities - Lima (Peru), Santiago (Chile) and Belo Horizonte (Brazil) and were entitled ‘A Focus on Productivity’, with a specific focus on technologies, equipment and solutions aimed at increasing efficiencies.

TAKRAF, part of Tenova, provide integrated solutions to the global mining, bulk material handling and minerals industries.

In addition to supplying the complete range of TAKRAF systems and equipment, TAKRAF Africa is also an acknowledged specialist on the continent’s mining and minerals market for the design and supply of air pollution control systems and equipment, with more than 4,000 systems installed on various operations, over the past 50 years.

Opportunities presented internationally, such as those in the copper, lithium, iron ore and phosphates industries in South America, mean there is considerable potential for TAKRAF Africa air pollution control technologies to be applied beneficially as part of the TAKRAF global offering.

TAKRAF Africa supplies its Tenova air environmental product lines via a comprehensive service, which ranges from initial assessment of current status and problem definition, through development and engineering of customized solutions to project execution and after sales service and support.

TAKRAF Africa’s range of bag house and bag filters includes the Tenova Reverse Pulse Bag Filter for economical collection of dust at high filtration rates.

With collection efficiencies greater than >99.99 %, it can operate 24 hours per day under arduous conditions, and is fully automated and self-cleaning with no internal moving parts. Filter bags are customized to suit the application, while risk to maintenance staff is minimized as inspection and replacement of bags are from the clean-air sides.

The Tenova-Simatek Reverse Jet Bag Filter is available in two low-maintenance models, the 4T for separation of dry and sticky dust particles, and the 3C for large volumes. The collection efficiency of the Tenova-Simatek range of equipment is 99.9 %.

Offering >99.5 % dust collection efficiency in the 1 – 2 micron range, the Tenova Dynamic Heavy Duty Wet Scrubber is ideally suited to general dust collection on medium to high dust loads. This is a low-cost technology in relation to its high dust collection and energy efficiency, and is supplied with a self-cleaning fan, offering low maintenance requirements and water consumption.

The Tenova-ELEX Electrostatic Precipitators, available as both wet and dry versions, are widely applied for the collection of liquid, solids or particulate matter.

The precipitators high collection efficiency when handling high gas volumes and the ability to handle fine and coarse particles mean that emissions are reduced to <20 mg/NM³, while temperatures of up to 450 °C can be accommodated and up to 1,300 °C when gas conditioning is included. The precipitators offer low running and maintenance costs, as well capital savings over other collector types when handling large volumes.

TAKRAF Africa also supplies the DSI range of equipment, including the Tenova DSI Dry Fog Dust Suppression System, the driest form of dust suppression available as only the dust is wetted and not the material.

With a low water consumption of typically less than 0.05 % by weight, the system is ideal for a range of applications, including transfer points, crushing and screening, feeders, truck dump hoppers and material loading/unloading applications.

The Tenova DSI Wind Fencing solution reduces the airborne particulate that accumulates from material handling operations at coal piles, transformer stations, gypsum piles and landfills, by protecting the stockpiles from wind.

The Boiler Emission Abatement (BEA) plant project for Impala Platinum Refineries in Springs, South Africa is a current example of TAKRAF Africa’s expertise in developing integrated diversified solutions to provide a holistic approach to air environmental control.

The plant provides an innovative and comprehensive solution to the reduction of boiler flue gas emissions, including particulate matter, NOx (nitric oxide and nitrogen dioxide) and SOx (sulphur oxides), which, if uncontrolled, pose severe health risks.
HITACHI

Reliable solutions

Wheel Loaders

Hitachi’s wheel loaders give you safe, easy operation that even beginners can work with like veteran operators. These user and environmentally friendly machines give you the productivity you need to get the job done.

Medium Excavators

When you’re looking for quality Excavators, you know you can rely on Hitachi. Just like our large excavators, the medium excavators are known throughout the world to be well-designed, utterly reliable machines.

OUR VISION

We are active in the evolution of “machinery” and the synergy between “human” and “business”

We consistently develop and provide our customers with the technology, products and services that generate new value that combines to create rich living spaces, making them more comfortable, highly developed and efficient.

While maintaining profitable operations, we act as a “corporate citizen having good judgment” by staying in harmony with the environment and participating in cultural activities, striving for a symbiotic coexistence with society.

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Knight Piésold continues to evolve

Global consulting firm, Knight Piésold continues to expand its footprint across the globe's mining countries.

Established in 1921, Knight Piésold now has 30 offices in 14 countries - Argentina, Australia, Botswana, Canada, Chile, Colombia, Ghana, Namibia, Peru, South Africa, Swaziland, USA, Vietnam and Zambia.

And the company has radiantly provided specialised services to the mining, power, water resources and infrastructure industries.

“We are engineers, environmental scientists, geoscientists and technologists who focus on creating value at every stage of a project through quality driven, sustainable solutions,” said Patrick Kampengele, Country Manager, Zambia, adding that the company works as one team, mobilizing local and global resources to meet the needs of each client.

“We work closely with our clients, understanding unique project characteristics within the context of today’s global business environment.”

In addition, Knight Piésold specialises in creating customised solutions at every stage of a project life cycle, while delivering sustainable, bottom-line results.

“We have led numerous award winning projects to completion and have fostered many long-term client relationships that hold strong today,” said Kampengele.

Knight Piésold has been driven to exceed expectations and enhance the success of its clients by understanding their unique needs, delivering creative and innovative solutions, and striving for continuous improvement.

“We build lasting relationships and explore new opportunities with clients, cultivate the professional growth of our staff, and invest in developing better communities,” said Kampengele.

Knight Piésold ISO 9001:2008 accredited, is committed to providing quality services to clients, the objective is fulfilled through the implementation of a quality system that incorporates a rigorous set of procedures and operating practices in accordance with ISO standards, legislation and regulations.

Working together with the client, the company determines specific goals for each development - throughout project planning offering prompt, cost effective services tailored specifically for the project.

“Our clients take confidence from our audit-able system which ensures a thorough review and approval process is applied throughout the project.”

“At Knight Piésold, we recognise that each project is unique. From drilling in permafrost to finding groundwater in the desert, we look for creative ways to overcome complex challenges.

“It all begins with ideas that we nurture and transform into innovation—all with the client in mind,” said Kampengele highlighting that the company’s specialists in engineering, environmental science, geoscience, management and testing, work together to provide our clients with the right solutions tailored specifically to the project.”
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We work closely with our clients, mobilizing local and global resources to meet the needs of each unique project understanding unique project requirements. We are engineers, environmental scientists, geoscientists and technologists, who focus on creating value at every stage of a project life cycle, while understanding unique project requirements. The company continues to evolve under the guidance of its specialists in engineering, environmental science, geoscience, and technology.

We build lasting relationships and results. Our clients take confidence from our documented procedures and operating practices in accordance with ISO standards, legislation, and regulations. We have led numerous award-winning projects to completion and have fostered enduring relationships with our many long-term client relationships that transform into innovation—all with the client in mind.

We recognize that each project has its own unique characteristics within the context of the company’s understanding unique project requirements. The company’s specialists in engineering, environmental science, geoscience, and technology incorporate a rigorous set of procedures and operating practices in the implementation of a quality system that is unique. From drilling in permafrost to finding groundwater in the world’s mining countries, we build lasting relationships and results.

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Today’s global business environment.

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• Environmental baseline studies
• Environmental assessments
• Permitting support
• Rock mechanics and pit slope design
• Tailings and waste management
• Water Management
• Hydrology and hydrogeology
• Heap leach pads
• Pipelines and pump stations
• Closure and reclamation
• Renewable energy integration

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