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ELB ENGINEERING SERVICES

Diversification strategy

aligned with changing global platform

South Africa's mining industry continues to face a harsh economic reality as commodity prices remain weak and an oversupply of minerals forces it into a greater state of repression. Despite this, **ELB Engineering Services'** (ELB) business is growing. CEO **DR. STEPHEN MEIJERS** attributes this market-defying success to the company's forward-thinking strategy which includes market adaptation, industry diversification and the establishment of new partnerships and technologies designed to meet industry's evolving needs. **LAURA CORNISH** writes.

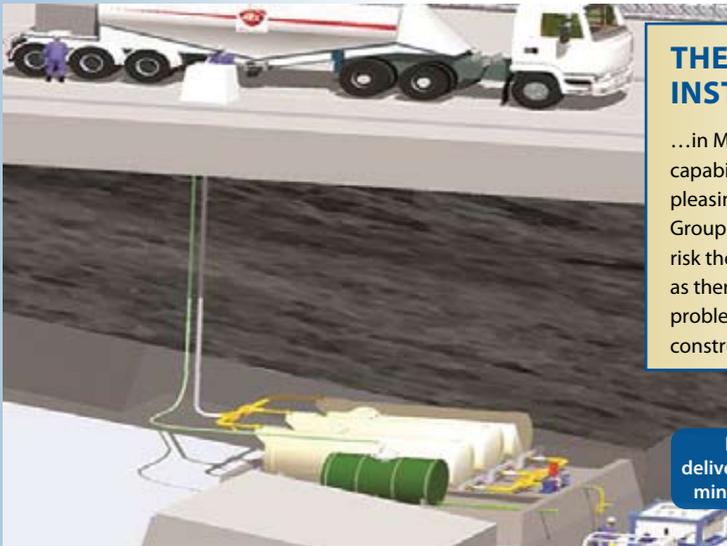
"The South African economy is in a state of stagflation, suffering one of the lowest growth rates (<2%) across the African continent

in 2014. Investor confidence has never been lower and we have had continual downgrades of our institutions since 2008 when the global recession started," Meijers starts. The resultant impact on foreign direct investment and capital projects is significant and has subsequently placed

South Africa's engineering fraternity under severe pressure. And the situation is not forecast to improve before 2017.

"Companies will not survive this changing environment if they continue forward implementing 'normal' business strategies," says Meijers. "Without a change in strategy and direction, longevity is not guaranteed."

Fortunately, ELB has been preparing for this rapidly changing market for the last 18 months and has adapted its business strategy to provide solutions which will assist industry reduce costs, improve efficiencies and ultimately maintain profitability. "Coupled with our entrance and growth into new industry sectors, ELB is in a position of strength and is undertaking work which also adds value to our clients' businesses as well as their shareholders," Meijers reveals.



THE ACQUISITION OF B&W ELECTRICAL INSTRUMENTATION AND CONTROL...

...in May 2014 has enhanced ELB's ability to provide a full construction capability alongside ELB Construction. Says Meijers: "B&W has showed pleasing growth over the past year and continues to add value to the Group and general market. This construction capability allows ELB to de-risk the construction portion of our EPC projects from a client perspective as there is no sub-contractor interface for this portion of work. Interface problems and complications typically arise in projects due to the construction portion of a project."

Explosives delivery system for a mining operation

The survival strategy

To outlast the current economic climate, mining houses need to reduce the operating costs of big capital equipment (such as earth and ore moving vehicles), increase staff competency capabilities and implement efficiency projects to decrease the average processing cost per ton while at the same time gaining better yields.

"These are the areas we have been focusing on over the last year and a half where we have in fact already been successful in the iron ore, manganese, coal, zinc and cement markets," Meijers indicates. The focus is life extension and Brownfield expansion projects which deliver maximum return from minimum cash input.

In South Africa, the company has also successfully ventured into new business areas, specifically providing Eskom-independent power solutions – typically in the niche 50 MW (and smaller) market space. The company is also gaining momentum within the broader industrial sector in Africa where numerous engineering opportunities are emerging.

Smart diversification tactics

Over the last nine years ELB has achieved above average growth rates "because we

have aligned ourselves with world-class appropriate technologies and know-how. To maintain this momentum going forward, particularly within our power and industrial sector focus areas, we are aligning the business with relevant technology partners". (This has always been ELB's primary business model and a key strength). The company is also moving, with force, away from its reliance on commodity markets into areas of discontinuity and applying its core engineering and project management entrepreneurial skills into those markets, which will undoubtedly provide greater business security and a steady workflow of new projects.

The company's core mining and bulk materials handling strengths remain integral to the overall business however. "But we believe there will be insufficient opportunities in Africa to provide bulk

export workload into the company over the next five years. Subsequently, our business approach is focusing on bulk import countries which receive product from Africa."

To maximise on potential opportunities in this industry sphere, ELB is looking to form reciprocal technology relationships with influential commodity import countries such as India, Thailand, Vietnam, Taiwan, Malaysia and Indonesia. "Our relationship approach is slightly different – the intention is to feed ELB technology and capabilities into companies with whom we have partnered and in return feed their technology back onto this continent."

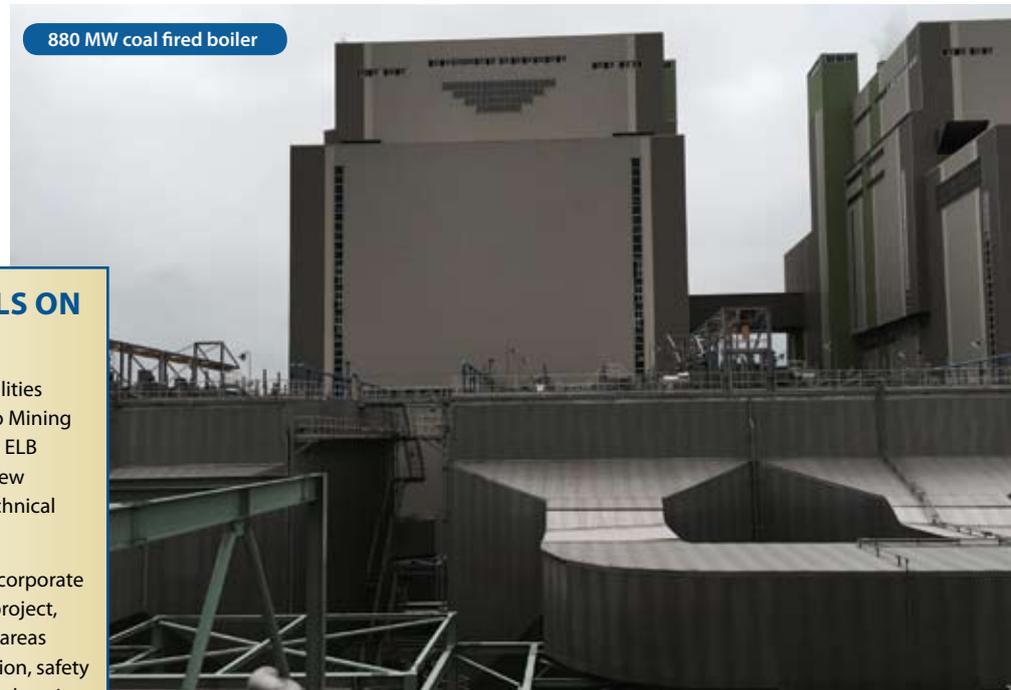
Importantly, because ELB understands how to evaluate and manage the risks associated with Africa, it will continue serving the continent wherever opportunities present themselves.

A closer look at power

ELB Engineering Services is focusing largely on three specific areas within the power market:

- biomass;
- gas; and
- waste-to-energy.

880 MW coal fired boiler



BRINGING NEW TECHNICAL SKILLS ON BOARD

Anglo American's research laboratory technical capabilities and skills have been shifted into a new entity – Isithelo Mining Products and Services – which is now housed with the ELB campus and extends the group's offering. Under the new company umbrella, its focus is to provide specialist technical expertise and solutions to the mining industry.

Comprising the technical staff from Anglo American's corporate office, the consulting team has combined its mining, project, geosciences and technology expertise to specialise in areas include geosciences, project engineering and integration, safety and sustainability, mining, drilling and blasting, comprehensive engineering services and change management specific to improved operational performance.



750 000

The number of hours (recorded in July 2015) ELB has worked at Medupi with no lost time injury – it has taken the company two years and four months to achieve this

Flu gas desulphurisation

“Our intention is to provide opportunities for clients to be electricity self-reliant and use Eskom power supply only as a back-up.

Technologies incorporated into this service include green solutions, power management and power saving solutions – to further reduce power consumption as well.”

ELB has already formed relationships with global leaders in the power field to gain access to the necessary technologies to quickly build its reputation and footprint in the market.

And the company has chosen global leading industry experts in these fields which include Denmark-based biomass leader DP Cleantech; United States-based Inglett & Stubbs International (ISI), leading technologists in gas turbines who also “recover heat at an advantage through its gas turbine process”; and thirdly Korea-based environmental protection and flu gas desulphurisation expert KC Cottrell.

Following the agreements established between these companies, ELB has been awarded the construction of a 25 MW biogas-to-power project at Sappi’s Ngodwana mill in conjunction with DP Cleantech and KC Cottrell.

A close look at the fast-moving consumer good (FMCG) market

While ELB has been present in this sector for the last 10 years, it is injecting more

investment and energy into growing this business strength across Africa. One of its more recent successes in this market is the engineering and construction contract for Nestlé’s new Ricoffee plant in Escourt, which is presently being commissioned.

Efficiency-enhancing mining projects

This business focus area has seen ELB take on a number of new and exciting projects within the mining sector.

“We have recently supplied two dense media separation (DMS) plants to Kumba Iron Ore’s Kolomela mine and another three DMS plants to its large-scale Sishen mine, designed to increase production.”

At present, the company is working on five efficiency projects for Vedanta’s new Black Mountain zinc and lead process plant, which are in the engineering phase.

ELB has also applied its business model into this more traditional market sector – growing its in-house technology by tying up with world-class partners which now include explosives specialist AEL Mining Services.

The companies’ agreement entails the installation of turnkey vertical drop infrastructure that will enable deeper, safe and efficient delivery of emulsions for blasting in underground mining operations. The systems allows the delivery of emulsion and sensitiser underground via a vertical pipeline to

storage tanks underground, thereby offering the requisite explosive energy on tap. This revolutionary system enhances safety, improves logistics and saves costs.

It will see ELB exclusively install the AEL-patented infrastructure at customers’ sites as required. It further includes the establishment of pertinent roadways and surface delivery points, drilling the borehole, installation of all piping, underground storage tanks, respective piping and ancillary equipment as well as the required safety and control devices. AEL will sign off on completion of the projects, commissioning and supply of emulsion.

The agreement between AEL and ELB is a culmination of work carried out over five years and this innovation will, as a first for the industry, provide mines with access to emulsion at levels as deep as 700 m. This is leaps and bounds above the current depths that have traditionally been achieved of approximately 225 m.

“ELB’s strength lies in its ability to partner with world-class technology providers and execute projects to the total satisfaction of its clients. The strength of this partnership lies in the ability of both companies to package a total solution to the end user. ELB is most honoured to have the opportunity to work with AEL in developing the business going forward,” Meijers highlights.

Exciting ventures

ELB is currently underway with the first phase of engineering for the 29 km overland conveyor for the new Asanko gold project in Ghana. “We hope to take this project into execution in the first quarter of 2016.”

The company is also working on a major new project abroad – having developed a coal drying technology for a large Indonesian lignite coal mining operation which can dry coal at a rate of 250 tph. The calorific value is increased by about 30% thanks to the reduction in inherent moisture content.

Successfully commissioned at the start of September this year is one of the company’s major mining projects – for Sasol Mining’s Impumelelo coal mine. The project included the infrastructure transportation of coal through a series of storage bunkers onto one of the world’s longest overland conveyors. **MRA**

Medupi coal feed conveyors





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