

CONSULTING & ENGINEERING

FOCUS FEATURE



Knight Piésold
CONSULTING

95 years and
still going strong



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2016 represents South African engineering and environment consulting specialist **Knight Piésold's** 95th year in business – a milestone achievement which officially makes it the oldest South African engineering and consulting company. Having evolved over the decades to meet changing industry needs, it is well positioned and prepared to extend its successful legacy for another 95 years, writes **LAURA CORNISH**.

Not only is Knight Piésold 100% privately owned, and 180 head strong, but it is focused on delivering an environmentally protected planet for generations to come, but is doing so according to the legislative requirements the South African government has stipulated.

The company's broad-based black economic empowerment (BBBEE) status has been Level 2 for the past five years which according to mining technical director Andrew Copeland, is one of many competitive advantages the consulting specialist has to offer the mining industry. "We are also fully ISO 9001, 14 0001 and 18 001 accredited," he adds.

"Unlike most businesses in our profession, Knight Piésold has survived through many economic ups and downs and has in fact grown subsequent to a few name changes, and we plan to continue using our strengths as we approach a century in business," he says. Today the company has five offices in South Africa and three in Namibia, two offices in Zambia, Swaziland and the DRC. They all form part of a large global corporation headquartered in Denver, US with supporting offices in Canada, United Kingdom, Ghana and South America as

well. (The South African office, founded by Dr. Francis Edgar Kanthack in 1921, was the original head office.)

Evolution continues

Knight Piésold has always, broadly speaking, specialised in civil consulting work – traditionally with Eskom (power stations) and the Department of Water & Sanitation (dams). This scope too has evolved over time as the company has seen increased focus in the hydro-power sector in parallel to new coal-fired power stations in southern Africa – at both a country and an industry level.

The mining sector has steadily become a significant revenue contributor to the

company making up about 30% of total business – impressive considering the economic challenged state of the industry at present.

"Through the design of large cyclone tailings dams on the Copperbelt and for Ergo, and building ash dams for Eskom, our exposure to the mining sector and its need for tailings dams transpired naturally and remains to this day well supported by our mining-strong international sister companies," Copeland points out. "Today, our focus lies predominantly in mine residue and heap leach pad designs and all associated infrastructure. This is in addition to our environmental service offering which again is another strong component of what we do, accompanied by expert geotechnical skill sets as well."

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Dealing with a challenging marketplace

The market for new projects has dried out to a large extent as a result of the commodities pricing crisis and while this has plateaued and in certain instances seen improvement (the gold sector for example) it is not yet reflecting in the project work on offer, Copeland outlines.

Delving deeper into the challenges that the mining support industry is



Social impact assessment

facing, Copeland highlights: “We are in a price war and have to submit low rates for project tenders in order to be competitive and meet industry demand. The key to maintaining a sustainable business model is finding innovative and cost effective solutions while not compromising on our service level – all of which we pride ourselves on doing.”

This has further driven a “war on talent” because retaining key qualified and technical staff is a challenge when work salary rates keep declining. In response to this obstacle, Copeland strives to ensure Knight Piésold’s young generation employees are afforded high level responsibility and opportunities for personal growth and development through on-site exposure. “Sustaining good middle management requires equal attention and effort,” he states.

Fortunately, 95 strong years in business has afforded Knight Piésold with a solid brand and identity and enabled it to improve further on its key strengths over time: “Which include heap leach facilities and cyclone tailings dams (which the company introduced to South Africa through Ergo). We are also leading the way forward in getting approvals from government for tailings liner/barrier system designs which has become compulsory in the sector,” Copeland highlights.

African project highlights

Knight Piésold is 99% complete with what Copeland describes as a highly innovative project for the company – a triple lined ash dump Eskom’s for new Kusile power station. It incorporates the latest, most modern technology and approach and also includes all associated infrastructure such as pollution control dams. The project commenced in 2008 and is designed as a 10 year facility.

In Madagascar, the company recently completed the design (phase 3), following the design and construction of phase 2, to raise the tailings wall for Ambatovy, which operates a nickel laterite mine in the country.

Early-stage construction, before the rainy season commences, has started and needs to take into account the country’s high rainfall and risk of seismic events. The project requires extensive earthworks to continually raise walls for the life of mine.

To accommodate high levels of rain water, the operation will store excess water in the rainy seasons while pumping down the levels all year round. To accommodate seismic potential, Knight Piésold has taken extra precautions in the design of the walls by incorporating extra drains to lower the water table within the earthwall itself.



Kusile ash dump

Copeland says that the company designed world-class heap leach facilities for both the Karma gold project in Burkina Faso and the Tschudi copper project in Namibia. “Both are operating successfully and offer future business potential as new phases come on line.”

“The Karma project celebrates a significant innovation concept on the below surface drainage layer which comprises natural laterite gravel to minimise costs (as opposed to the more traditional crushed gravel which needs to be imported). A number of tests proved this approach to be highly cost effective.

The company’s footprint is well cemented at the Kinsevere copper project in the DRC where it is embarking on a new environmental impact study for an expansion project. This is in addition to environmental (water and dust) monitoring, biodiversity and rehabilitation programmes as well. “We are also well established in Phalaborwa and boast Palabora Mining Company, Foskor, and Bosveld Phosphates as long-term clients.”

Strong on social responsibility

Knight Piésold’s corporate social initiative aims to address the skills shortage the South African Department of Labour has identified by supporting projects that provide education and training in the under-resourced areas of maths, science and technology for learners at secondary school level. Its objective is to transform industry by investing in transformative elements, such as empowering learners to expand their existing skills set as well as realise their dreams and aspirations. **MRA**



Heap leach projects