



KPMC

MOVING MOUNTAINS



www.kpmc.co.za

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KPMC is a niche BEE project management and engineering company, specialising in combining the practicalities of mining, the challenges of logistics and the volumes of bulk materials handling with innovative solutions and experience

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KPMC began life when Mike Daniel set about re-establishing the materials handling business of UK-based Strachan & Henshaw, getting it fit for South Africa's post-apartheid era. When S&H changed hands in the early 1990s, he seized the opportunity to claim some of the expertise and talent freed up in that process, bringing in South African partners to establish a truly indigenous South African engineering business: the result was KPMC, a Level 2 BEE enterprise with bulk materials handling at the core of its capability.

KPMC grew quickly after it was established in 2005, and today is known throughout southern Africa and beyond as an environmentally friendly business that uses innovation to reduce the impact and cost of moving ore and minerals from one place to another. The company is organised in two divisions, says Daniel—capital projects, and aftermarket sales and spares. “We focus on mining products and systems including ore transportation solutions; and the logistics and project management that we do are very important too.”

KPMC understands the business of mining, and has scoured the world to bring the best equipment to Africa—above all, the kind of equipment needed to run modern mines efficiently and at low cost, such as vibrating floor technology for automated ore handling both on surface and underground, and ropeless winders that solve how to travel down a deep-level mine more quickly and safely and more cost-effectively than any other available method.



Freight train
hauling goods

But the best equipment is not enough on its own. An effective supplier to the industry needs to be able to put together a package, as KPMC did last summer when the South African engineering company Bateman Engineering asked it to provide three American manufactured agglomeration drums for Areva's huge uranium mine at Trekkopje in Namibia. "We manufactured the rubber lining in Singapore, the girth

gear and the rails in Germany, shipped it all to the USA where we did the steel fabrication and shop commissioning, loaded it all onto three barges, transported it down the flooded Mississippi and shipped it from Houston to Walvis Bay, then brought it up to the site by road."

Not long ago it would have been unthinkable to source steel fabrication in the USA but though China was considered,

"WE FOCUS ON MINING PRODUCTS AND SYSTEMS INCLUDING ORE TRANSPORTATION SOLUTIONS"



Ecofab rail car covers covering fertiliser snake



Coal auger sampler

the USA came up with the overall best price. "America is very competitive right now," says Daniel. This was an excellent example of how KPMC combines logistics with engineering to deliver a solution. Each of the clients has different needs, he says, though the reason KPMC pops up in all the largest projects is invariably that it saves them money.

Just about the biggest greenfield coal operations in the region are found in the Moatize basin in the eastern Tete province of Mozambique. KPMC is involved with both large operators there, Vale do Rio Doce and Rio Tinto. It is carrying out the pre-feasibility, feasibility and detailed design for

bulk materials handling in Phase 1 of Vale's project, and is part of the team working on Phase 2. In Rio Tinto's it will play a vital part in quality control, sampling the road and rail trucks as they leave the mine. "Our equipment is a road truck with a hydraulic pack on the back and an auger that extracts coal samples, pulverises it, screens it and analyses it. The lab result is available before the truck reaches the harbour so they know which stockpile to put it on." Accurately monitoring the grade of the coal is crucial to achieving the best market price.

South Africa's economy is doing well and had been shielded from the worst aspects of the global recession but compared with

its neighbours it is positively stagnant. The drive for future growth in the resources sector lies to the north, and KPMC is already engaged in Zimbabwe, Botswana, Kenya and Zambia, as well as Namibia and Mozambique. That's why the office location at the Johannesburg suburb of North Riding is ideal—apart from allowing the staff to avoid the city's congestion it is 10 minutes from Lanseria Airport. "Our engineers can fly out to these countries, visit the mine site and be back working on the designs very quickly—it means we can be really quick on our feet!" he says.

The severest restraint on growth in Africa is the lack of infrastructure, says Daniel, and what road and rail links do exist are fragmented. This makes it difficult to supply mines, which are rarely near an existing railhead. "Where there is a railway line we can use that: where there is a road we can use the road. But there are gaps: I can take a train from Walvis Bay to northern Namibia but there is no rail link to Zambia. I have to go onto a road for 200 kilometres, then when I get to Livingstone I go via rail all the way to Dar es Salaam." But until recently there was no cost effective way to transfer bulk materials from truck to train and vice versa.



Vibrating floor clearing a grain silo

Now, KPMC is in partnership with an American company called RailRunner to bring bimodal transport to South Africa—the only hurdle still to cross is approval by rail operator Transnet, expected any time now. Basically RailRunner is a road trailer that can be transferred to rail bogies in a matter of minutes, making use of cheaper rail transport wherever it is available—one

locomotive and a two-man crew replaces 150 trailers, tractors and drivers so the cost of transportation is drastically reduced. Daniel believes the introduction of bimodal transport will have as big an impact on African logistics as mobile phones are having on African telecommunications.

The trucks will be manufactured locally, and can be as versatile as the market demands, with side tipping trucks, ISO containers, tankers and even a truck designed to carry an inflatable 'balloon' type tank to carry diesel or liquid chemicals to a mine site. The tank can be deflated and the vehicle returned with ore. "It's a way to make sure we have as much back-haul cargo as possible, cutting the cost of the

operation even further." Bimodal transport fits neatly with KPMC's stance—a niche solution that is also highly innovative—as well as with the particular circumstances of the African market and the needs of the mining companies among its clients.

When KPMC offers a service or a product, it looks at the whole life cost as well as the capital cost, he continues, because operating costs account for the greater part of any project. "We keep our costs as low as possible because our clients are not cost makers, they are cost takers, and they have to establish where they are in the global cost curve of their commodity. We are trying to position them at the bottom of the cost curve."

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2005

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Year KPMC was founded

Examples include a vibrating floor that uses just 40 watts of electricity to move material, or a newly launched and SABS approved line of electric trailing cables to feed moving equipment like draglines or continuous miners. Using new rubber formulations, these last longer and increase the uptime of the equipment. And with millions of rand being lost each year to cable theft, a plan to give every cable a microdot 'signature' to identify its owner will at last provide a deterrent to opportunists attracted by the black market for copper.

Products and systems like these make KPMC an attractive partner for mining companies, consultants and smelters, and its project management arm means it can always identify the most appropriate technology for a specific bulk handling problem. And to deliver, it needs people, says Daniel. "Among the 20 or so people working at KPMC, we have a huge amount of experience—that is our greatest asset. But every grey-haired engineer has an apprentice, because it would be unthinkable to lose all that knowledge." ■

For more information about
KPMC visit:
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Stacker stacking
out coal



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