Life cycle management

In open cut mine water management a well-designed and engineered pump system or solution and consideration of the life time cost will save money now and in future. **Jamie Wade** writes.

Pumps and pump water management systems form an integral part of the mine set up and life cycle.

An increased investment and focus on training designers, engineers and operators will lead to much improved cost of ownership, according to AllightSykes general manager – engineering Gert Inja.

"Greater understanding of pump system design and in particular pump suction set up will result in greater pump reliability and less non-planned maintenance issues," he told *Australian Mining*.

"Total life cycle pump costs need to be considered when evaluating pump capital equipment not just the initial capital cost."

Greater importance has been placed on open cut water management in water capacity requirements to wash coal during drought and stricter EPA, HSE and company mine site regulations, according to Inja. This has resulted in an increased level of HSE and EPA as well as company mine site regulations features being incorporated into the specified, designed, and manufactured pump sets.

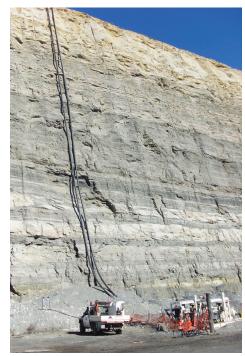
In addition, as the mine open cut pits get deeper pump suppliers have followed suit to design and supply pumps with more pressure and flow.

Special material – 316 stainless, CD4MCU super duplex stainless steel constructed pumps – are being manufactured to suit particular site fluid conditions such as low or high pH, alkalinity and acid conditions. There is also an advanced level of mobile pump monitoring and remote control and associated alarms, automatic start up and shutdowns.

Mine operators today are also demanding heavy-duty pumps that are easy to move around, install, operate, maintain and fix, according to Inja.

"Pumps must have the ability to easily upgrade from new and in the future to include website mobile monitoring integrated into customer SCADA system, associated alarms, diagnostic failure and maintenance tools, automatic start up and shutdowns."

Some of the latest innovations and solutions in pumps for mining, says Inja, include the ability to easily upgrade from new and in the future to include website mobile monitoring integrated into customer SCADA system, associated alarms, diagnostic failure and maintenance tools, automatic start up and shutdowns. This results in greater accessibility to pump location and associated equipment data and more effective maintenance, service and repair planning and a reduction in pump life cycle costs.



There are better ways to manage mine water.





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Tel: +61 3 9728 3973 | Email: info@kces.com.au

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