


 ■ UNDERGROUND MINING

## WAMS slams maintenance costs

A NEW South Wales company claiming to offer a unique equipment liner maintenance and supply service has impressed several major mines with the operating and capital cost savings realised to date. These have been significant enough at the North Ltd-operated Northparkes copper-gold mine in New South Wales for the mine's underground maintenance superintendent to actively promote the service to other mines in the North group.

Northparkes' Geoff stapylton said wear liners used in ore bins, feeders, ore changeover points, chutes, hoisting skips and other plant and equipment constituted significant cost items. Accurate monitoring of wear rates and a sophisticated preventative maintenance program had substantially reduced wear liner costs at Northparkes.

While plant and equipment at the big underground mine had been designed to facilitate the use of advanced monitoring systems, Stapylton said the liner-maintenance savings achieved at Northparkes were due mainly to the comprehensive liner maintenance service provided by WAMS Pty Ltd.

Established in 1997 by a former ANI senior manager, Jerry Hoslin, the Newcastle-headquartered WAMS (Wear Applications & Monitoring Services) has worked with Northparkes and several other big underground mines – including Ridgeway at Newcrest Mining's Cadia gold site, Rio Tinto's Peak and Pasminco's Elura mines, all in NSW, and WMC's Olympic Dam operation in South Australia – to reduce the cost of wear protection systems used on a wide range of plant and equipment.

Hoslin said he set out to create a "one-stop shop for the process of improvement of wear liners". As national product manager for ANI Bradken's bulk materials handling and underground mining products, he was "very much aware of a market requirement for the type of service we are now offering".

"Northparkes gave us our first opportunity to prove our point," Hoslin said. "And this was achieved within nine months of starting."

WAMS and Northparkes targeted two areas – hoisting skips and loading station flasks – identified as the highest wear and cost areas.



Use of state-of-the-art measuring devices and WAMS' monitoring and forecasting techniques, and product selection expertise, is said to have carved almost \$500,000 a year off the mine's skip liner replacement and operating costs, and about \$32,000 a year from loading station flask liner costs. In addition, Northparkes is getting 456,000 tonnes of extra ore throughput out of each hoisting skip liner protection system – a 300% improvement. Loading station floor liners previously changed out every month due to breakage are now expected to be changed out every 18 months, after they have worn out.

"The biggest problem with wear liners at most mines is that they are treated as low priority items mainly due to the thinking that liners are a necessary evil that have to be changed whenever they wear out," Hoslin said.

"Most mines are looking at the big picture and underground wear liners are not a big priority."

Northparkes' Stapylton agreed. "I don't think anyone really sits down and works out what the potential savings are."

WAMS' "process of improvement" includes four steps which start with a site audit and application analysis, and finish with liner change-out forecasts and performance monitoring. Also included are product recommendations, benchmarking studies and product supply management.

By precisely forecasting liner change-out dates, maintenance staff can accurately plan shutdowns. "We take the guesswork out of liner maintenance," Hoslin said.

He said WAMS was not biased toward any particular wear product or material and had developed a "standard liner material price matrix" for common alloy products such as quench and tempered plate, cast white iron, cast manganese and chromium carbide overly plate. Customers could purchase these liner materials at a fixed price.

"We don't stop at delivery of a particular product," said Hoslin. "We follow the product through its life and develop improvements to achieve an overall cost reduction for that piece of equipment."

"We currently cannot provide a material that never wears out – it doesn't exist. But we can provide a service that develops the best material and design currently available to prolong liner wear life, in most cases at least double the life and therefore halving the cost."

WAMS is well on the way to capturing 10% of a market Hoslin estimates is worth at least \$15 million a year. "We don't believe there is anybody else doing what we're doing," he said.

While Hoslin said the focus of WAMS' business was currently underground mining, there is little doubt the service can be applied to surface plant and equipment. Stapylton feels other mines will be receptive.

"I gave a presentation to a North maintenance conference some time ago and the guys from Western Australia (Kanowna Belle and Robe River Iron Associates), in particular, were astounded at the service that we get and what we're actually getting (for our money).

"They've been looking for someone to do it for them and they didn't realise there were people out in the market already doing it."

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– Richard Roberts

