

# A-wear of the HURDLES

**A wearplate that wears from bottom to top is cutting maintenance and costs.**

The decision to extend the life of one of the largest copper concentrate and gold mines in Papua New Guinea has come as great news to Australian company Keech Keeplate who have been chosen to line the new 25, 250-tonne dump trucks trays.

Keeplate is corrosion, abrasion resistant steel product used on applications like truck bodies, shuts and bins or anywhere that wear through abrasion is an issue.

Keech Australia's Michael Scott said the product, which is manufactured from chromium carbide beading welded onto 250 grade steel base, significantly increases the lifespan of the trays, buckets and blades of the mine equipment it is used on.

Available in a range of thicknesses, overall weight of the liner-plates along with the impact conditions

are all taken into consideration when lining the trucks, Scott said.

"You don't want to add too much weight to the tray, particularly when the trucks are used for downhill loads.

"At the same time, you want the plates to be thick enough to provide maximum protection, so it's a matter of balancing these two issues to find the right Keeplate for the job," explained Scott.

Keech are also utilising their Wearpact system in Papua New Guinea which is also proving popular, Scott added.

Manufactured from Keech Australia's own high impact and wear resistant steel, Wearpact features multiple retentions to prevent castings from coming loose. Ease of installation and removal is ensured thanks to the hammerless easy wedge retainer.

"The Wearpact system



is designed for full bucket nose protection and a clean upper lip plane finish. There is no intrusive casting inside the bucket to hinder loading or dumping operations. The system also provides the option of moving from semi-spade to full-spade by simply changing the castings," said Scott.

"It's been manufactured to wear from the bottom up,

which gives a greater wear away to throw away ratio, thereby reducing the overall cost for the mining operator.

"We're currently fitting the system to a fleet of underground loaders buckets in a large copper and gold mine in the highlands region of Papua New Guinea following a successful trial of the system on underground loaders," said Scott.

"Given that the Wearpact system is also suitable for surface loaders, it has huge potential to improve operations at a large number of mines across Papua New Guinea."

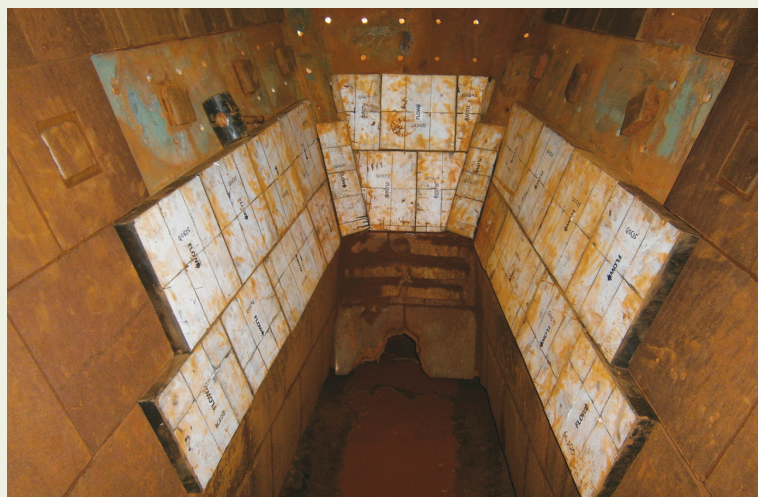
Scott said that with the mining boom continuing across Papua New Guinea, further interest in the range of Keech products is expected in the coming months.

## Going the distance in wear resistance

**REDUCING** maintenance costs and increasing production is driving a trend towards tougher wear resistance materials that are lighter and last longer, according to Mike Allen of Perth-based company Crushing & Mining Equipment (CME).

"In the last decade we have seen the requirement for mines to reduce maintenance cost and increase production. This has resulted in the need for wear products to perform for longer periods," Allen said.

"Simultaneously, the industry has improved health and safety in the workplace with an increased understanding of manual handling issues." The emergence of lighter and more durable materials such as ceramic is finding increasing favour in mining as a substitute for traditionally heavier materials applied to equipment for longer wear life. "Previously, mines



*Ceramic wear plates are lighter and more durable than traditional materials.*

would simply put in heavier metal wear materials to last longer. However, this is not always the best solution option.

This is why there has been growing demand in ceramic wear products over the last 10 years," Allen told

**Australian Mining.** "Mine operators are looking to minimise down time caused by maintenance while at the same time looking to have a material which performs consistently. In both gold and iron ore there is a large amount of fines material which results in high abrasion and low impact. This is where ceramic products perform best."

"In the past ceramic wear products have not handled impact well and were prone to cracking. This has changed with innovations in rubber vulcanising to the ceramic which allows for a degree of cushioning. This has resulted in an increasing number of applications in which ceramic liners can now be utilised. "Due to the weight saving offered by ceramics, a 62mm liner can be installed over a 20mm metal wear liners. The 62mm ceramic wear plate has 50mm of useable wear material which gives impressive increases in liner life."