

Melbenarch - Aliens Case Study

Improving Wear Life in a Copper/Gold Operation with Melbenarch's Alien Technology

Old design vs New Aliens Design

The implementation of Melbenarch's Alien Technology has proven to be a game-changer for the copper/gold operation in central Australia. By addressing the critical wear-life issues associated with the Mill Feed Chute, Alien has not only eliminated the frequent downtime but also significantly improved both production and cost efficiency.

Melbenarch is proud to offer Alien Technology as the solution to the most demanding wear challenges in mining operations. Our technology delivers genuine improvements in performance, extending the life of critical equipment and providing a substantial return on investment.



\$3 Million
Per day saved



12 Month
Service Interval

MELBENARCH



melbenarch.com.au



Perth, Western Australia

CHALLENGES



The primary issue facing the site was the inability of the Cast White Iron liners to meet the expected wear life. The site had hoped for a 12-month operational window but was forced to replace liners every 9 months due to rapid wear caused by the aggressive nature of the mill feed.

SOLUTIONS



Melbenarch's Alien Technology was introduced as a solution to the wear-life issues faced by the site. Alien is a revolutionary wear material developed as a composite matrix combining industry-leading high-chrome white iron and ZTA ceramics. This cutting-edge composite material is designed specifically for applications requiring superior resistance to abrasive wear, extreme loading, and crushing forces.

**Extended
Wear Life**

**Tailored
Solutions**

**Reduced
Maintenance**

BENEFITS



1

Extended Operational Window

The wear life of the Mill Feed Chute has been extended to the desired 12-month interval, effectively eliminating the need for unplanned change outs. This improvement has resulted in a substantial reduction in downtime.

2

Cost Savings

The reduction in maintenance costs, labor, and downtime has led to a significant reduction in operational costs. With the introduction of Alien Technology, the site is now adding millions of dollars to the bottom line annually.

3

Increased Production Capacity

By eliminating unplanned downtime, the operation has been able to consistently meet production targets. The site is no longer losing approximately \$3 million per day due to unplanned maintenance, resulting in a direct improvement to the bottom line.