

## Case Study: Centrifugal pump - mining slurry processing

### Problem

The customer was experiencing heavy and frequent leakage issues, requiring regular replacement of the existing packing as well as shaft sleeves - all contributing to high maintenance costs.

Short life cycle,  
excessive leakage

### James Walker solution

Installation of Lionpak<sup>®</sup> 3301 with unique lubrication system incorporating red PTFE lubrication core that releases red lubricant through the aramid braid from the ID during operation. This helps reduce friction and heat build-up safeguarding shaft sleeves and reducing maintenance cost as well as energy consumption while maintaining long service life in the harsh and abrasive environment.



### Application

Slurry processing plant in mining industry in South Africa.

Warman Heavy Duty AH Single Stage Centrifugal Slurry Pump

Battlemax Heavy Duty IN Single Stage Centrifugal

- Media: chrome, platinum and gold slurry
- Temperature: 30-40°C
- Speed: 800-1800RPM
- Gland pressure: 8-12bar
- Water flush at 1bar pressure
- Shafts: Ø 45.5mm, Ø 59mm, Ø 82.5mm, Ø 100mm, Ø 130mm, Ø 177mm
- Packing sizes: 8mm, 10mm, 12.5mm, 16mm, 20mm, 24mm

### Results and benefits

The use of Lionpak<sup>®</sup> 3301 packing resulted in doubled service life of the pump packing (from 1 to 2 months). The packing has also reduced the erosion of shaft sleeves, resulting in less frequent replacement of sleeves, significantly reducing maintenance and operating costs as a result.

Life cycle doubled,  
leakage reduced

### Existing solution

Generic graphite-based packing



Improved energy consumption



Lower operational costs



Significant reduction in maintenance