

GOLD MINE CYCLONE FEED DISTRIBUTORS

Cyclone Distributor / Alumina & SiTech / Gold

Location WA Goldfields
Industry Gold Processing

THE CHALLENGE

Customer was experiencing aggressive wear in their cyclone distributors using rubber lining which is commonly used throughout the industry. As with most distributors, high wear zones occur around the outlet areas with concentration on the transitions. They were only achieving approx. 700 hours service life before needing to open distributor and perform repairs. They decided to engage a ceramic lining company who relined distributor with standard alumina ceramic tiles and cylinders for the outlets. Distributor then started achieving approx. 1600 hours service life before repairs were required and customer believed that was the best

they could achieve. That was before a site visit and inspection by HMA Wear Solutions.

THE SOLUTION

HMA Wear Solutions standard distributor lining for aggressive wear was offered. This consisted of cast monolithic one-piece flanged inserts for the outlets using our SiTech ceramic and engineered alumina ceramic tiles for the remaining areas. This lining method targets the highest wear zones, whilst ensuring lining costs are kept to a minimum.

THE OUTCOME

First HMA Wear Solutions distributor has achieved nearly seven times greater wear life service over previously best performing lining to date. Due to success customer has purchased another distributor for Cyclone B plus a rotatable spare.



Original Rubber Lining around Outlets after 700 hours



Alumina Ceramic Lined after 1600 hours



New HMA WS Distributor



After 10,000 hours service

Overview	
Application	Gold Processing
Product Handled	Cyclone Feed 70% solids, P80 of 0.78mm
Plant Production	1.8 million tonnes per annum
Duty	High Volume
Issue Being Resolved	High Maintenance Costs and Downtime
Material Replacement	Rubber Lining and Alumina Ceramic Tiles
Maintenance Frequency	Rubber Lining = 700 hours Alumina Ceramic Tiles = 1600 hours
What was installed	Cast SiTech Ceramic Flanged Inserts & Engineered Alumina Ceramic Tiles
Study Results	Original HMA WS Distributor still in service after 10646 hours as of the 3/02/17