

Bullnose® Discharge Cone

Location	Ontario, Canada
Platform	SAG Mill
Conditions	Gold Operation, High Abrasion
Solution	Bullnose® Discharge Cone

Situation

A mining operation in Ontario, Canada, was facing significant performance issues with its existing steel (CrMo) discharge cones used in a Ø36' SAG mill. The site's twenty-seven-piece discharge cone systems required replacement every 11.5 months. This frequent maintenance disrupted operations, reduced efficiency, and impacted overall productivity.

Solution

To address these challenges, the Bradken team partnered closely with the customer to transition to the proprietary Bullnose® Discharge Cone solution. This innovative system is engineered using premium materials, including high chrome white iron and rubber composite, which is designed to extend wear life, improve mill availability, and enable faster, safer installation and removal.

Results

The implementation of the Bradken Bullnose® Discharge Cone delivered clear operational gains. Installation time was cut from 20 hours per set to just 8 hours per set. This was achieved with the system's keyed design, resulting in minimized reline downtime while improving safety and efficiency.

Service life increased by 100%, with minimal wear observed after 23 months, compared with the original CrMo cones that needed to be replaced every 11.5 months. Based on the observed wear, and wear rates, our predictive data indicated that the service life could have been extended to 27 months.

The transition to the composite Bullnose® solution has resulted in a 21ton weight reduction in total set mass. The superior design allows for wear-resistant materials to be used only in critical wear areas, reducing unnecessary weight, while still boosting wear life and additionally, the Bullnose has contributed significantly to mill throughput improvements.

Based on these results, the customer has rolled out the Bullnose® system across multiple mills, achieving significant maintenance cost savings and improved throughput across the site.

Results:

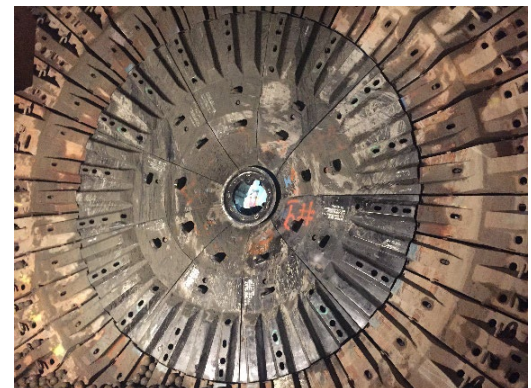
- Increased Service Life by 100%
- Reduced installation time from 20 to 8 hours per set
- 21 tons in the overall set mass increasing mill efficiency
- The Bullnose solution showed minimal wear after 23 months of use, with predicted life extending to 27 Months.



Minimal wear of the Bradken Bullnose® at 23 months



Bullnose® 9-segment being installed



Completed Bradken Bullnose® Installation



Our Innovation. Your Advantage.

© Bradken Pty Limited 2025. All company names, logos, product names, and identifying marks used throughout this publication are the property of their respective trademark owners, they are used for descriptive purposes only.

