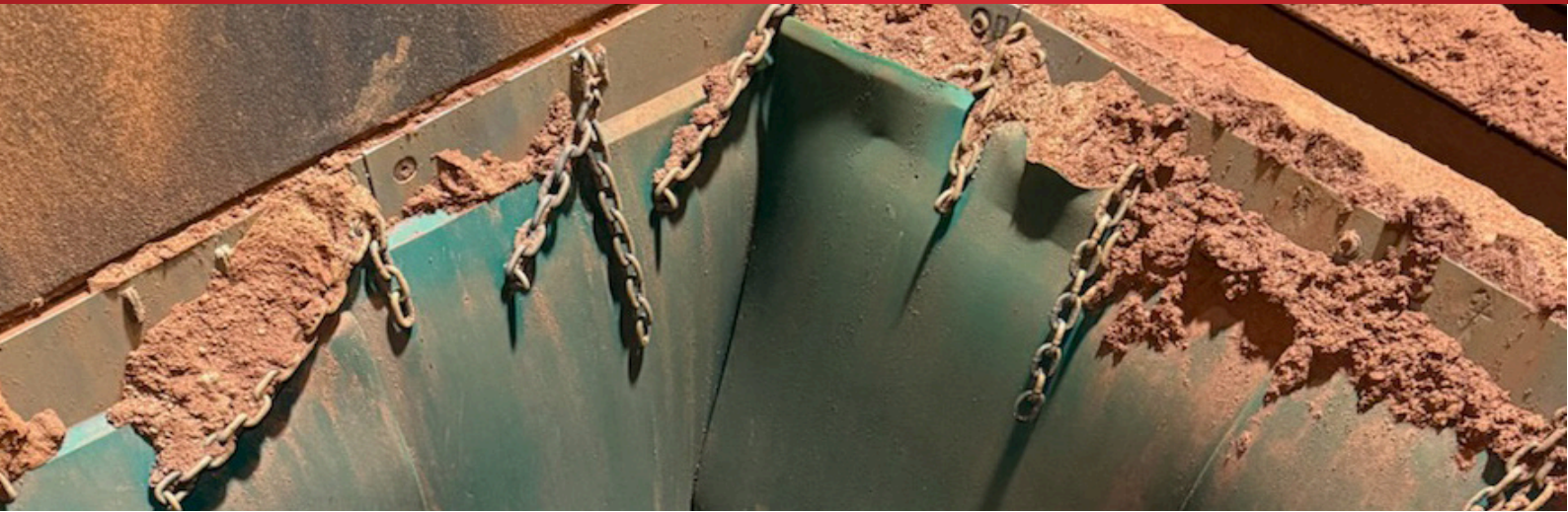




Kinder Australia Product:

K-Superline® Engineered Polyurethane

Product Category:

Flow & Anti-Wear

Location:

Northern Territory

Conveyed Materials:

Bauxite

Zero Blockages. 18+ Month Liner Life. Once-Yearly Maintenance.

OVERVIEW

Our client is a bauxite mining operation located in the Northern Territory, recognised as one of the highest-throughput facilities in the region. Handling in excess of 2,100 tonnes per hour, the site plays a critical role in supplying global bauxite markets and operates under strict production targets, tight maintenance windows, and demanding environmental conditions.

With such high material volumes moving through the plant, even small disruptions have the potential to create significant operational and financial impacts, making reliability essential to the mine's ongoing performance.

CHALLENGE

This operation had been struggling with chronic issues in its sizer discharge chutes. Persistent material hangup repeatedly forced the plant into unplanned stoppages, creating substantial production losses and high tool time during scheduled maintenance windows. Compounding the issue, the access to the chute required rope access and tight access - so any solution needed to be lightweight and able to fit through a small access hatch in the side of the chute. The existing rubber system inside the chutes were deteriorating rapidly, leading to high tool times every 6-12 weeks. Over several years, the site investigated and trialled multiple systems to rectify the problem, including a fixed liner system, improved spray bars, however the hangup and excessive wear continued to disrupt production and drive up maintenance costs.

Recognising the need for a long-term and engineered solution, the site engaged Kinder Australia to solve the problem. Kinder Engineering worked with the Site Asset Management team to establish clear objectives and performance measures for the next trial. The highest priority was the elimination or substantial reduction of hangup in the sizer discharge chutes. They also needed a lining system that exceed the current 6-12 week life cycle as well as be able to installed by the shutdown maintenance team quickly and easily. Any solution that could not meet these requirements would simply continue the cycle of downtime and high maintenance exposure.

- Persistent chute hangups causing unplanned downtime and production losses.
- Rapid liner wear requiring replacement every 6-12 weeks.
- Restricted chute access making maintenance difficult and time-consuming.
- Previous liner and spray system trials failed to resolve hangup and excessive wear.

SOLUTION

Kinder Engineering recommended the **K-Superline® Polyurethane Lining**, drawing extensive experience across multiple high-volume bauxite handling facilities. Kinder's Engineering team understood which lining systems would meet the sites objectives and succeeded and which liners would not.

The proposed system incorporated customised hanging polyurethane wear curtains designed to promote continuous, smooth material flow through the discharge chute. Their low-friction surfaces prevented the formation of buildup, while the embedded chains mounting system enabled rapid liner replacement without requiring full chute access. The thin and flexible curtains were able to be rolled into a tight package that could be manually transferred through the small 800x800mm opening, while the high abrasion resistance of the K-Superline® meant that the lightweight and thin curtains would handle the high throughput of the chute. Each component was engineered to the site's specific wear patterns, ensuring optimal performance and significantly extended liner life. **K-Superline® incorporates an integrated dual-colour wear indicator to allow rapid and precise visual monitoring of wear performance.**



RESULTS

- 100% elimination of chute blockages and associated unplanned downtime.
- Achieved 18+ months of continuous liner service from the baseline of 6 weeks.
- Maintenance was able to be conducted in the scheduled windows with no increase in tool time.
- Eliminated regular high-pressure cleaning, reducing labour and operating costs.

Once operational, the improvements were immediate and significant. Chute blockages previously a chronic and costly issue was eliminated entirely. A high risk task that was previously conducted every 6-12 weeks is now done once per year - greatly reducing the site maintenance team to critical risks and strenuous tasks, while ongoing manual tasks such as daily high pressure cleaning was no longer required.

The K-Superline® liners demonstrated exceptional durability, achieving over 18+ months of continuous service dramatically reducing maintenance labour and exposure to high risk tasks for the maintenance personnel.

By removing the root cause of material hangup and delivering a long-lasting, easily serviceable solution, Kinder's K-Superline® system has transformed a major operational bottleneck into a reliable, low-maintenance asset. The flexible hanging curtains maintain consistent material flow, while the engineered polyurethane construction ensures exceptionally long wear life.

With unplanned downtime eliminated and maintenance efficiency significantly improved, the mine has realised substantial gains in productivity, reliability, and overall operating cost reduction.



Kinder Australia Pty Ltd
ABN 28 006 489 238

P: +61 3 8587 9111 | F: +61 3 8587 9101
conveyorsolutions@kinder.com.au
kinder.com.au

© 2026 Kinder Australia Pty Ltd

KINDER K™
EXPERIENCE INNOVATION PRODUCTIVITY

40
YEARS
OF INNOVATION