

Upgrading Apron Feeder Skirt Liner Material to Enhance Resistance

Location	Pilbara, Western Australia
Platform	Apron Feeder
Conditions	Skirt Liner Upgrade
Solution	Ceramic Liners

Results Summary

- Delivered within six - week lead time
- Operating life of over 12 months
- Increased production output
- Reducing shutdown Frequency

Situation

A major iron ore customer in the Pilbara Region of Western Australia was experiencing significant operational and safety challenges with their primary apron feeder. The feeder exhibited excessive wear, frequent product leakage from the sidewalls, and unplanned maintenance shutdowns, all of which disrupted operations. The feeder was fitted with Ni-Hard liners, which wore down due to the short life, contributed to product spillage and loss, and frequent replacements. This not only impacted production efficiency but also exposed workers to unsafe environments during maintenance activities. The customer urgently required a redesign solution to reduce feeder downtime, with a strict lead time of just six weeks.

Solution

Bradken's design and engineering teams conducted a comprehensive assessment of the issue and leveraged advanced modelling to identify the most suitable liner solution for reducing maintenance cycles and ensuring consistent product flow through this analysis. Bradken determined that replacing the Ni-Hard cast liners with 112mm ceramic liners would provide superior abrasion resistance, significantly extend maintenance intervals, and minimise downtime. To expedite the solution, the redesigned liners were engineered to standard sizes, ensuring a quick and seamless supply. Additionally, Bradken incorporated a 135mm stud installation, as specifically requested by the customer, to enhance structural integrity and reliability.



Primary apron feeder tunnel, viewing towards discharge end.



Skirt liner adjustable mountings.



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.



Upgrading Apron Feeder Skirt Liner Material to Enhance Resistance

Location	Pilbara Region, WA, Australia
Platform	Apron Feeder
Conditions	Skirt Liner Upgrade
Solution	Ceramic Liners

Results

The installation of Bradken's ceramic liner solution delivered measurable improvements:

- Extended maintenance intervals, reducing shutdown frequency
- Minimised product spillage, enhancing operational efficiency
- Increased production output, ensuring smoother operations

The project was successfully delivered on time within the six-week lead time, enabling the customer to maintain consistent product flow without disruption.

The ceramic liners have been operating to standard for over 12 months and are expected to continue delivering reliable performance well into the future.

Results Summary

- Delivered within six - week lead time
- Operating life of over 12 months
- Increased production output
- Reducing shutdown Frequency



Primary apron feeder tunnel, viewing towards discharge end.



Skirt liner adjustable mountings.



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.

