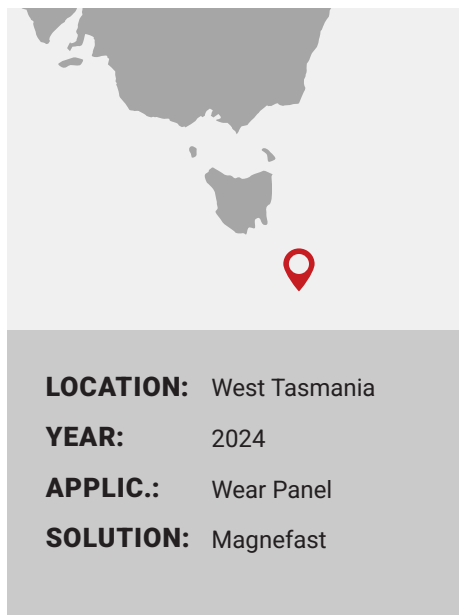




CASE STUDY: ORE TRANSFER CHUTE IMPROVEMENT AT A POLYMETALLIC MINE

In September 2023, Elastotec trialled its Magnefast Ceramic Wear Panels on a high-impact dual-deck chute handling 25mm lead ore at 110 TPH. The panels replaced white iron liners that lasted just 7–8 weeks and required 36+ hours of labour per changeout. Over 6 months and 517,000+ tonnes, Magnefast aimed to do better – with less downtime, longer wear life, and zero scaffolding.



ISSUES ON SITE:

A polymetallic mine located in western Tasmania produces zinc, copper, and lead concentrates, along with gold. The chute on site processes 25mm polymetallic ore (primarily lead) at a rate of 110 tonnes per hour. Material impacts the top floor from a 500mm drop height and the bottom floor from 1200mm.

Liner replacements previously required three 12-hour day shifts, with scaffolding setup taking up to 2 hours. Over a 6-month period, the system handled approximately 517,440 tonnes of ore. Inspection showed the lower-floor white iron liners had worn completely

through, exposing the rubber backing and even the chute substrate.

Below photo shows the lower floor white iron worn through into the rubber lining and into the chute substrate.



IMPLEMENTATION:

In September 2023, the site trialled Elastotec's Magnefast Ceramic Wear Panels on a dual-deck transfer chute, replacing the existing studded white iron liners on the top floor and side wall.

The below are the performance objectives in making the switch to Magnefast wear liners:

- Reduce liner changeout time
- Increase service life
- Reduce product usage
- Reduce OH&S risks
- Eliminate scaffolding set up



Side wall preparation



Install 2023



Top floor install

300% Increase
in Liner Service Life

80% Reduction
in Shutdown Time

RESULTS:

The Magnefast trial successfully met the current liner service life target, lasting 6 months with only 7mm of wear on the 50mm thick ceramic panels. As a result, the panels have not needed replacement and are expected to significantly reduce the frequency of liner changeouts.

A predicted service life increase of over 300% is anticipated. Instead of replacing panels, rotation has been used, leading to substantial savings in both material costs and labour.

Projected performance estimates extend the service life to 18 months, based on a 15mm wear allowance observed at the 26-week inspection point. Key impact zones will be upgraded with high-integrity ZTA ceramic, further improving durability.

Overall, labour requirements are expected to drop by more than 80%, demonstrating major operational efficiencies gained through the Magnefast system.

TIMELINE AND KEY RESULTS

2023

Polymetallic Mine required longer wear liner service life

Existing white iron liner service life 26 weeks

2023

Initial Magnefast Ceramic Installed Magnefast ZTA ceramic liners into the transfer chute top floor and side wall

80%
Reduction in
Shutdown Time

2024

First inspection at Inspection after 26 weeks, liners intact with 15 mm of wear in 50 mm of ceramic.

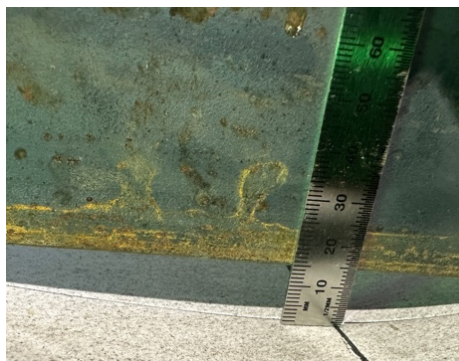
Returned to service for a second 26 weeks

2024

September inspection - 52 weeks - 30mm wear

Estimated 78 week service life

300%
Increase in
Liner Service Life



15mm Worn From 50mm Ceramic March 2024



Inspection March 2024