

MAGNEFAST — POLYMETALLIC METAL MINE



Magnefast – Polymetallic metal mine

A Polymetallic mine in the west of Tasmania produces Zinc, copper and lead concentrates as well as gold.

In September 2023 a trial installation of the Elastotec Magnefast ceramic wear panels was put in place on a dual deck transfer chute. The existing studded white iron wear liners were replaced with Magnefast ceramic wear liners on the top floor and side wall.

The main reasons for making the change to the Magnefast Ceramic Wear Liners were:

- Longer service life from ceramic liners (current wear liner life 6 months)
- Quicker Wear liner changeouts
- Reduced maintenance labour

PERFORMANCE OBJECTIVES:

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



SIDE WALL PREPERATION



INSTALL 2023



TOP FLOOR INSTALL

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CURRENT CONDITIONS:

Ore type: 25mm Polymetallic (Lead)

Drop height: 500mm onto top floor

Drop height: 1200mm onto bottom floor

Liner changeouts – every 6 months

– 3 x 12 hour day shifts.

Scaffolding required can take up to 2 hours.

Tonnes per hour: 115

Tonnes over the 6 month period: 517,440

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



INSPECTION MARCH 2024



TRIAL PERFORMANCE:

Magnefast trial achieved **6 MONTHS** service life meeting the current liner objective. The Magnefast liners showed 7 mm of wear in a 50 mm thick ceramic, panels have not been replaced and are expected to eliminate several liner changes.

SERVICE LIFE INCREASE (PREDICTED) > 200%

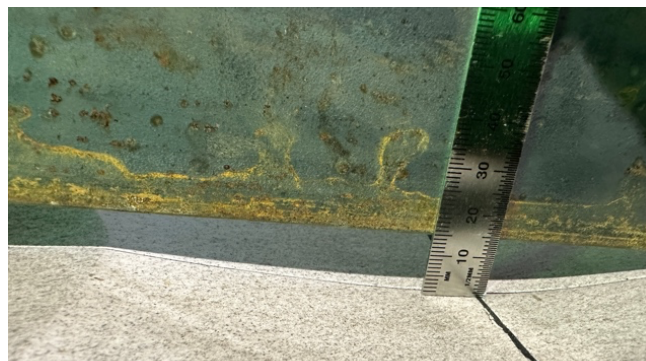
Magnefast liners were not replaced at 6 month planned shut. Some panels rotated saving cost on product and reduced labor.

PROJECTED PERFORMANCE:

Projected Magnefast service life of **18 MONTHS** based on a 15mm wear loss where impact occurs at 26-week inspection.

Labor savings by putting Magnefast in is estimated at:

>80% REDUCTION



15MM WORN FROM 50MM CERAMIC MARCH 2024



MAIN IMPACT ZONE WILL HAVE A HIGH INTEGRITY ZTA CERAMIC CALLED ZTA WHICH WILL FURTHER DECREASE WEAR IN THESE AREAS.

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Timeline for Polymetallic Mine Installations

2023

Polymetallic Mine required longer service life

Existing white iron Liners had a 26-week Life Cycle

80%
reduction in
shutdown
time

2023

Installed Magnefast liners into the transfer chute top floor and side wall.

2024

Inspection after 26 weeks, some wear on impact zone, put back into service for another 26-week cycle with no force shutdowns

80%
reduction in
required
labour

2024

Inspection from the trial which lasted 12 months with signs of wear on the impact plates that needed replacing.

Whole chute has now been relined with Magnefast.

>200%
increase
in liner
service life

For additional information on Polymetallic metal mine:

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