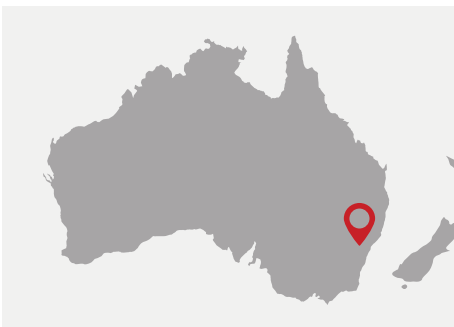




CASE STUDY: TRANSFER CHUTE RELINE MAINTENANCE IMPROVEMENT

A high-wear transfer chute was previously shut down every few weeks for liner replacement, requiring hot work and long maintenance hours. With Elastotec's Magnefast™ system, changeout time was reduced by 81% and liner life extended up to 18 months. This case study shows how this upgrade cut labour, improved safety, and boosted efficiency in their operations.



LOCATION: New South Wales

YEAR: 2024

APPLIC.: Transfer Chute

SOLUTION: Magnefast

ISSUES ON SITE:

The site was experiencing major operational challenges due to the poor performance of its transfer chute wear liners. In high-flow areas, liners had to be replaced every 2 weeks, and every 8 weeks in lower-wear zones, leading to frequent and disruptive shutdowns.

Each liner change required up to 22 hours of labour-intensive work, significantly increasing maintenance costs and downtime. Compounding the issue, the replacement process involved hot work in confined spaces, exposing workers to elevated safety risks and requiring additional permit controls.

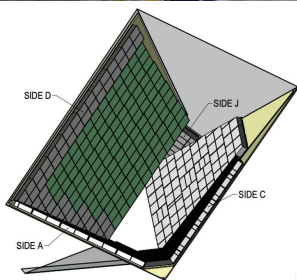
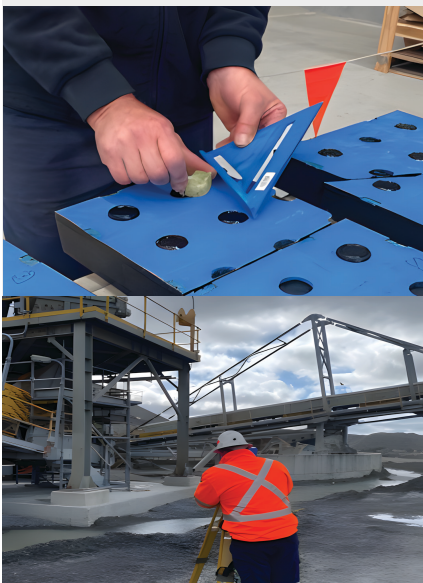
Additionally, the absence of existing CAD drawings made chute redesign and precise liner fitting more challenging.



IMPROVEMENTS:

To address the site's maintenance and performance challenges, several key improvements were implemented. The chute was first laser scanned to generate accurate 3D CAD models, enabling precise redesign of the internal geometry to optimise wear paths and minimise material hang-ups.

Elastotec's Magnefast™ Ceramic Wear Liners were then installed, featuring a hot work-free magnetic attachment system that significantly simplified installation and future maintenance. The wear panel layout was carefully mapped for maximum efficiency, allowing for easy removal and replacement. Prior to installation, the chute received a new mild steel reskin with an anti-corrosion treatment to extend the overall service life of the structure.



80% Reduction
in Labour

600% Increase
in Service Life in high-flow zones

80% Decrease
in Shutdown Time

RESULTS:

The introduction of Elastotec's Magnefast™ Ceramic Wear Liners delivered transformative results for the site.

The innovative magnetic attachment system reduced liner replacement time from 22 hours to just 4 hours - an 80% improvement - while also cutting labour requirements by 80%, leading to significant savings in shutdown costs. By eliminating the need for hot work, Magnefast™ enhanced safety and removed the risks associated with confined space welding.

After three months in operation, the Magnefast™ liners required no maintenance in high-wear areas and delivered an impressive 18-month service life. In lower-wear zones, the system is projected to last over 60 months.

