



CASE STUDY: CERAMIC WEAR PANELS FOR GOLD MINE SLURRY BOX

As part of a major production upgrade at a large Australian gold mine, Carters Engineering was engaged to design and fabricate a new slurry box for the ore treatment plant. The box's location posed access challenges, making liner installation and replacement difficult. The project required a durable wear liner system with a minimum service life of five years and the ability to be replaced quickly to minimise plant downtime.



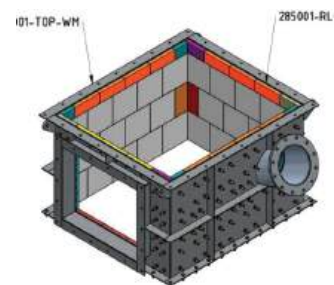
LOCATION: Orange, NSW
YEAR: 2021
APPLIC.: Slurry Box
SOLUTION: Bolt-On Ceramic Panels

ISSUES ON SITE:

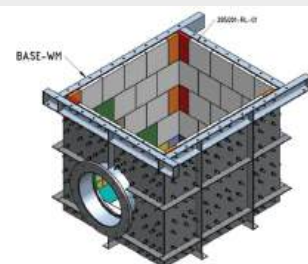
The slurry box was located in a position with difficult access, making liner replacement challenging and time-consuming. It also needed to operate continuously under full slurry immersion, demanding a highly durable and reliable wear liner system.

To meet production targets, the mine required a liner solution with a service life exceeding five years while allowing for quick and efficient change-outs.

Adding to the complexity, the slurry box featured multiple circular and oval pipe connections that required precise liner fabrication and fitting.



TOP SECTION



BOTTOM SECTION

SOLUTION:

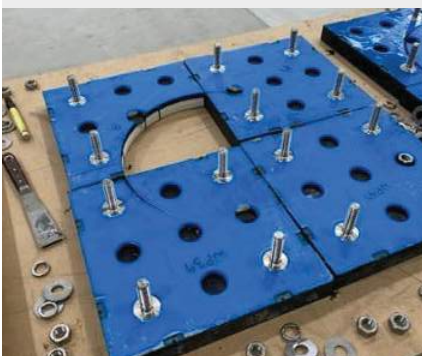
To meet the project requirements, Elastotec recommended the use of 38mm thick ceramic wear liners specifically engineered to deliver the required service life and wear performance in continuous slurry immersion.

To eliminate the risk of corrosion and potential debonding, Magnefast wear panels with an engineering plastic backing plate were selected - offering a robust, non-corrosive solution ideally suited for wet, abrasive environments.

The panels were attached using stainless steel studs, ensuring a secure and long-term installation even under demanding operating conditions.

During fabrication, Elastotec utilised its state-of-the-art CNC cutting station to manufacture each wear panel to a precision tolerance of $\pm 2\text{mm}$, including accurately cut holes for 600mm, 350mm, 338mm, and 75mm pipework.

Before final rubber lining and painting, a full trial fitment was conducted to verify the alignment and dimensions of every panel. This step ensured that installation on site was seamless, with all cutouts perfectly matching the incoming pipework and no modifications required during assembly.



RESULTS:

The installation achieved a perfect fit and alignment of all ceramic panels, with zero issues encountered during assembly - a direct result of Elastotec's precision fabrication and thorough pre-fit verification process.

This flawless installation not only streamlined project delivery but also ensured that the slurry box could be commissioned on schedule without unplanned delays. The liner system is expected to deliver a service life well beyond five years, providing the site with long-term wear protection and reducing the frequency of maintenance interventions.



Seamless installation with zero on-site issues.

Proven service life of over five years in continuous operation.

Precision fabrication cuts maintenance time and **boosts efficiency.**

Faster future change-outs mean less downtime and more uptime.