

CASE STUDY: K-Redi-Liner

Kinder Australia product:

Product category:

Conveyed materials:

Application area:

Installation date:

K-Redi-Liner® Ceramic Modular Lining System

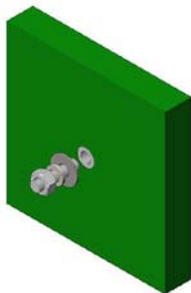
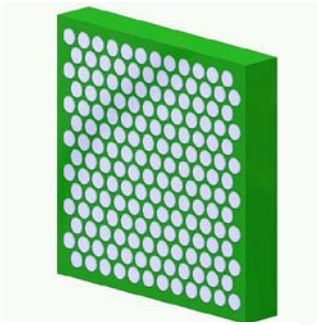
Flow & Anti Wear

Basalt Blue Metal with high Silica content

- Oversized chute from primary screen (top deck) to secondary cone crusher.
- 90 degree turn and deflection plate.
- 150-200mm minus sliding down steep chute (3-5m).
- High product velocity and impact forces exist.

July 2014

Previous problem:



Above: Front and back 3D model of a K-Redi-Liner® Ceramic lining panel.

Right: photo showing the site's conveyor height and transfer chute angle on the way to the crusher.



Our customer is an ACT-based building and construction materials supplier. They were looking for a way to improve the wear life of their transfer chute. Whilst a Hardox steel lining had previously been installed, it was not coping with the large bulk volume being conveyed at this site. The 2 metre drop height of the chute is severe and the Hardox lining was lasting just 3 weeks before it required replacing. The replacement value and stoppage time requirements were making this lining very costly to maintain.



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Resolution:

K-Redi-Liner® - Key Features:

- Longer lasting high wear protection even for extreme applications.
- Bolt-in 305mm x 305mm panels can be arranged into any wear pattern that is required.
- Replace only what's needed instead of replacing the entire liner.
- Light weight compared to steel.
- Ceramic cylinder panels available in thicknesses of 50mm and 63mm.
- Solid polyurethane panels available in thicknesses of 25mm, 38mm, 50mm and 63mm.
- Bolt sizes of ½ and ¾ inches available.
- Available in a variety of Durometers to suit specific applications.
- Kryptane® polyurethane provides high wear protection.

After 6 months of full capacity production and no maintenance stoppages, two **K-Redi-Liner® Ceramic** modular lining panels that were positioned on the leading edge of the inside of the chute and experiencing the full impact of the Basalt Blue Metal application dropping from a 2 metre height, were starting to show a small amount of wear. **Without the need for any welding**, these two lightweight K-Redi-Liner® panels were then **re-positioned and rotated** to another area within the chute that experienced slightly less direct impact, but still had the capacity to provide **very effective lining protection**.

After experiencing such a dramatic and instant improvement to the overall productivity of the conveyor, inspecting the K-Redi-Liner® panels **9 months since their initial installation** (with production of approximately 200,000 tonnes of Basalt Blue Metal) and the site's maintenance supervisor has reported that he is delighted with the performance of the K-Redi-Liner® Ceramic. Subsequently plain K-Redi-Liner® Polyurethane panels have been installed in areas that experience sliding abrasion and they are also still in use showing very little signs of any wear.



K-Redi-Liner® Ceramic panels showing little signs of wear after 6 months full capacity usage.

K-Redi-Liner® is a registered trademark of Kinder Australia.



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