

Case Study - K-Redi-Liner[®] KC Ceramic

Kinder Australia Product:	K-Redi-Liner[®] KC Ceramic
Product Category:	Flow & Anti-Wear
Location:	New Zealand
Conveyed Materials:	Glacial Alluvial Greywacke Overburden Rock <65mm / 1600 KG/m ³
Conveyor Belt Width / Speed:	900mm Belt Width / 1.3m/sec
Rate:	350 TPH
Installation Date:	January 2020

CHALLENGE:

- *Extend the service life of steel liners.*
- *Access to and changeout of liners was difficult and time consuming.*
- *Escalating costs due to frequent liner replacements.*

Based in New Zealand, our client holds over 80 years of expertise in construction and roadworks. We take a closer look into the wear lining challenges faced at one of their aggregate/quarrying operations.

The Quarry has previously relied on Bisalloy 80 with wear plates welded over the top to absorb the impact. Overtime maintenance teams pointed out the original steel liners were not satisfactory and failed to meet performance targets. Intensive observations concluded, the liners couldn't last the distance intended and were extremely difficult to change, this was due to extra welding requirements.

As the steel liners were installed directly under a horizontal shaft impactor crusher this directly contributed to the liners wearing out at a faster rate than desired.

Access to the liners was made more difficult, with the crusher having to be opened for necessary maintenance, rotation, and replacement work on the liners.

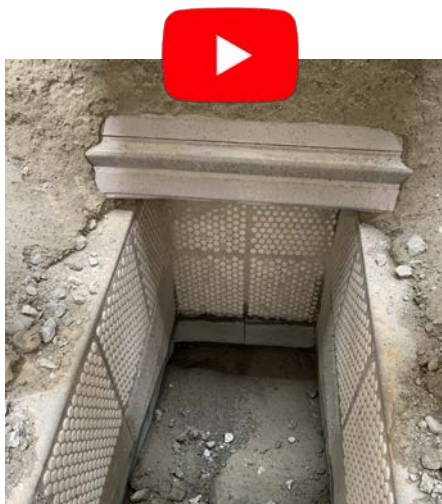


Photo: K-Redi-Liner[®] KC Ceramic installation inside chute.



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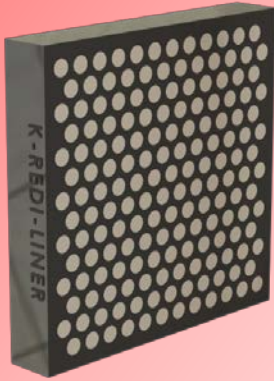
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SOLUTION:



Product Links

[K-Redi-Liner[®] KC Ceramic](#)

Kinder and our New Zealand Field Technical Representatives visited the Quarry to gain valuable operational overview of the wear lining issues onsite. Later, the team presented Kinder's [K-Redi-Liner[®] Ceramic KC Lining](#), a proven, longer lasting and high-performance wear resistant solution that can endure the harshest aggregate/quarrying application. Quarry maintenance teams installed and mounted the K-Redi-Liner[®] Ceramic solution with ease, efficiency and without delay.

It's important to note, Bisalloy 450 blocks were required and mounted under the hammers to absorb the maximum force/impact. Rather than exposing K-Redi-Liner[®] KC Ceramic Liners to the direct and full force of impact, the technical team chose to strategically line inside the chute. In this position, K-Redi-Liner[®] KC Ceramic Liners were still exposed to the highly abrasive/ricocheting rock contact as opposed to direct rock contact.

RESULTS:

- *Longer lasting wear achieved.*
- *Product performance targets will be met with regular monitoring and rotation.*
- *Simple and seamless liner replacement.*
- *Less frequent liner replacement has resulted in significant cost savings.*

Some positive outcomes reported, ***“have not had to rotate K-Redi-Liner[®] anticlockwise yet after 1,250 hours, previously would've had to reline twice by now, which takes the impactor out for the day”.***

The ceramic blocks have not worn out as fast as the polyurethane that encapsulates the ceramic, this delivers a longer lasting wear solution and significant costs savings.

Production down-time is kept to an absolute minimum, through regular monitoring and rotation, the installation of K-Redi-Liner[®] KC Ceramic Liners are well on their way to achieve the ideal target set by the Quarry.



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