

CASE STUDY: K-Superline®

Kinder Australia product:	K-Superline® Polyurethane Lining Sheet
Product category:	Flow & Anti Wear
Location:	Dandenong, Victoria
Product description:	K- Superline® solid polyurethane sheet, G83 Durometer
Conveyed materials:	20mm, 17mm and 14mm aggregate and manufactured sand
Conveyed belt speed:	Vertical drop of 500mm
Installation date:	September 2014

Previous problem:



Above: Photo showing the worn ceramic lining trialled inside the wok.
Below: photo of worn rubber lining



Our customer is one of the world's leading heavy building materials companies, producing aggregates, including stone, gravel and sand, to premixed concrete for use on residential, commercial, civil or industrial projects.

Our customer uses a wok style apparatus to mix the bulk cement preparation, ready for transit in mixer trucks. The wok lining experiences a narrow and concentrated impact area, handling high volumes of highly abrasive aggregate and sand particles.

At the Dandenong site, Kinder Australia's ceramic wear lining panels were supplied by a different supplier and trialled as a way to conserve the steel walls of the wok structure. However due to the concentrated high volume impact of the abrasive aggregate, the tiles became broken or dislodged.

This failure was also due its adhesive method of installation best suited to flat and level lining requirements. The curved surface of the wok compromised the bond of the ceramic, causing buckling. This very quickly then lead to the individual ceramic modules peeling off the lining backing.

As an interim lining, a high quality rubber lining was then installed by the same supplier, which began to show even higher levels of erosion after a short time in use.



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Resolution:

K-Superline® - Key Benefits:

- Longer lasting anti-wear protection
- Reduced material hang-up
- Greater tear resistance
- Light weight
- Simplified bolt-on installation
- Significantly lower noise levels

Given the curved nature of the wok, 8 panels of K-Superline® were **water-cut to precise measurements** with a pattern of bolts replicated on each sheet.

The **bolt-on design** of K-Superline® has the potential of allowing worn areas to be swapped and manoeuvred with other less worn sheets. In a confined space, this can be done quickly and **without the need for welding equipment**.



Image showing K-Superline's polyurethane coated bolts.

K-Superline® has now been installed at the Dandenong site for 5 months and is showing no signs of wear. **K-Superline® has exceeded our customer's expectations of its durability potential.**



K-Superline® after installation at Dandenong, Sept 2014



Same K-Superline® in Feb 2015, showing no signs of wear.



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