

CASE STUDY: K-Sure[®] Belt Support and K-Ultra Dual[®] Seal

Kinder Australia Product:	<u>K-Sure[®] Belt Support and K-Ultra Dual[®] Seal</u>
Product Category:	Belt Support and Conveyor Skirting and Sealing
Location:	Auckland, New Zealand
Conveyed Materials:	Lime
Conveyed Belt Width/Speed:	800mm / 1 metre per sec
Rate / tonnes per hour	100
Installation Date:	May 2017

Video Link

BEFORE & AFTER INSTALL 

CHALLENGE:

- Excessive material spillage and dust emissions
- Excessive clean-up costs
- Premature belt damage and belt tracking issues
- Environmental dust and safety issues

For over 50 years our New Zealand customer has built a strong reputation for manufacturing high quality steel products and is a key supplier to a multitude of industries and markets.

Site inspections at the steel plant exposed major inefficiencies in material flow, as well as excessive material spillage and dust emissions between existing skirting and conveyor belt, due to the distance between frames. These inefficiencies resulted in frequent shutdowns and spiralling clean-up costs necessitating recruitment of an external cleaning contractor to manage material spillage minimising environmental and potential safety hazards.

Premature belt wear and tracking issues were also identified, with material becoming trapped under the conveyor belt and accumulating on the conveyor structure.



RIGHT
Image
BEFORE Installation



LEFT
Image
AFTER Installation





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SOLUTION:



Video Links

- K-Sure[®] Belt Support 
- K-Ultra Dual[®] Seal 

After two previous faultless installations of **K-Sure[®] Belt Support System** and **K-Ultra Dual[®] Seal** at the site, it was agreed this combined solution be rolled out within the steel plant's impact zone, under the chute. Two extra **K-Sure[®] Belt Support** frames were introduced to reduce gap support to 300mm solely for rail support, including a lead on frame.

K-Sure[®] Belt Support System supports the conveyor belt by absorbing the full impact of conveyed material at the transfer point. Delivering minimal belt damage, premature wear and importantly, a longer lasting conveyor belt. In addition, the **K-Sure[®] Belt Support system** simultaneously maximises the effectiveness of the **K-Ultra Dual[®] Seal's** intended function.

The existing conveyor belt was removed and frames packed carefully to ensure 100% linear surface. Prior working knowledge of the plants intricacies meant installation was conducted seamlessly & efficiently, with minimal time and labour, including drilling of extra frames.

RESULTS:

- *Elimination of material spillage*
- *Significant reduction in clean-up costs and time*
- *Containment of environmental dust*
- *Customers product expectations exceeded*

The steel plant can confidently confirm the recommended conveyor belt support and skirting solution has exceeded its performance expectations, with virtually no material spillage plus the facilitation of a continuous and uninterrupted flow of conveyed materials throughout the plant. Other positive outcomes include significant clean-up costs savings due to reduction in material spillage and dust containment.

The outlook sees the steel plant implementing the **K-Sure[®] Belt Support** and **K-Ultra Dual[®] Seal** solution within 3 other areas of the operations with the view of optimising productivity, reducing its environmental footprint and sustaining its competitive edge in the steel manufacturing industry.

