



CASE STUDY

SKIRTING

ENGINEERED POLYURETHANE

PRODUCT:	Skirting Engineered Polyurethane
PRODUCT CATEGORY:	Conveyor Skirting & Transfer
LOCATION:	Port of Gladstone, Queensland, Australia
CONVEYED MATERIALS:	Coal
CONVEYED BELT WIDTH:	94.5" (2400mm)
LENGTH AT TRANSFER POINT:	23 feet (7 meters (3.5m x 2))
CONVEYED BELT SPEED:	1025 feet per minute (5.2 meters per second)
RATE:	6000 tons per hour
BELT DOWNTIME:	2 hours for skirting replacement
COMPULSORY CHANGE-OUT TIME:	Every 5 weeks
INSTALLATION DATE:	September 2008

PROBLEM DESCRIPTION:

Gladstone Ports Corporation was looking to improve its bulk materials handling processes. One of the areas under examination was the conveyor system with a focus on how to make it safer, more reliable and improve its overall performance and uptime.

In September 2008, Gladstone Ports Corporation and the engineering team at Kinder & Co collaborated to trial a new material that they hoped would dramatically improve the transfer point efficiencies, as well as achieve significant long-term cost-savings for the Corporation.

The material trialled on the RG TANNA Coal Terminal was Argonics' Skirting, a revolutionary engineered polyurethane, against the existing and commonly used skirting material, SBR Rubber.



RESOLUTION:

After more than 8 months of monitoring and assessing the installation, the Skirting was still performing beyond its expectations.

Even with this significantly prolonged usage, a measurement of the skirting showed only 1.5 mm of wear had incurred.

Once the decision was taken by Gladstone Ports Corporation to roll out the Skirting Engineered Polyurethane to all of its conveyors, tests since that time have showed around 8 times greater service life.

Further studies revealed the significantly lowered friction and heat offered by the Skirting versus SBR rubber, resulted in greatly reduced belt wear and tear. As the importance, integrity and service life of a conveyor belt is paramount to site productivity and running costs, the task to improve efficiencies in the opinion of the customer, has successfully been achieved.



The Port of Gladstone is Queensland's largest multi-commodity port, housing the world's fourth largest coal export terminal and covers an area of 4321 hectares of land.