CASE STUDY:

QUARRY TRANSFER POINT UPGRADE IMPROVES SAFETY AND CONTAINMENT

Site overview

A Queensland quarry relies on its pug mill to process aggregates and construction materials efficiently. At the heart of this operation, the conveyor transfer point helps maintain a steady flow of material through the process, supporting smooth and efficient production.



Issues on site

The pug mill conveyor transfer point was experiencing significant material spillage and airborne dust . Excessive airborne dust created an unsafe working environment for personnel, while material escaping from the conveyor contributed to product loss and reduced operational efficiency.

These issues also required frequent housekeeping and clean-up around the conveyor, adding to labour and maintenance demands, disrupting operations and increasing personnel exposure to escaped material and causing dust inhalation near the affected transfer point.

KEY FINDINGS:

REDUCED
Dust and spillage

REDUCED
Housekeeping requirements

IMPROVED
Conveyor containment

SAFER
Working environment



Client: Quarry Operation

Location: South East Queensland

Industry: Cement & Aggregates Manufacturing

Scope of Project: Modular chute upgrade incorporating improved sealing and belt support technologies to address dust generation and material spillage at the pug mill conveyor transfer point.

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THE SOLUTION:

Following a review of the application, Martin Engineering Australia recommended a modular chute upgrade designed to improve material containment and belt support. The upgraded chute was fitted with Martin® Skirtboard Liners and Martin® ApronSeal™ skirting, creating a triple-sealing system that helps contain material and prevent dust from escaping. The settling zone was also extended, providing more opportunity for airborne dust to settle back into the material stream before leaving the transfer point.

Track-Mounted Idlers and Slider Cradles were installed throughout the chute area to provide continuous belt support and eliminate belt sag. By stabilising the belt and maintaining contact with the sealing system, the solution helped reduce spillage, dust emissions and ongoing clean-up requirements.



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RESULTS

The upgraded transfer point significantly reduced material spillage and dust generation, creating a cleaner, safer and more productive working environment around the conveyor.

With substantially less housekeeping and clean-up required, operators can spend less time around the affected transfer point and focus on more productive tasks.

By improving material containment and belt stability, the upgrade supported more efficient material transfer and improved overall operational performance.

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