



## Case Study:

# ENHANCING CONVEYOR BELT DURABILITY IN CHALLENGING ENVIRONMENTS

Location:  
**Newman,  
Western Australia**

Operation Type:  
**Iron Ore**

Year:  
**2023**

### The Problem:

In today's mining industry, operational efficiency is essential, particularly for clients contending with high-abrasion environments. One client encountered substantial difficulties with their conveyor belts when processing abrasive, sharp, moisture-laden ore bodies. The standard belts they were using proved inefficient, frequently needing extensive repairs or full replacements within just a month of installation.

This persistent issue not only disrupted their operations but also led to substantial financial losses due to downtime. The client recognised the urgent need for a solution that would enhance the performance and longevity of their

belts, thus minimising both repair frequency and costs associated with unexpected failures.

### The Solution:

Transmin ConveyorPro effectively tackled this issue by thoroughly reviewing conveyor calculations to ensure the optimal belt selection for different applications. Their analysis revealed that, although the initial belt choices were adequate, further enhancements could be made by adjusting the belt properties to better match the operating conditions.

As a result, Transmin ConveyorPro recommended the ProTOUGH MA grade belt, a specialized belt designed to withstand harsh environments and deliver a durable solution for challenging conditions.



STANDARD CONVEYOR BELT



AFTER INSTALLATION ProTOUGH CONVEYOR BELT



### Key Benefits of ProTOUGH

- ▶ **Minimised Downtime**  
Reduced wear and failure rates have significantly decreased operational interruptions.
- ▶ **Improved Safety**  
Increased belt reliability fosters a safer working environment for personnel.
- ▶ **Boosted Productivity and Profitability**  
The enhanced efficiency leads to higher production output and greater financial returns.

### Proven Performance Over Time:

The installation of the ProTOUGH belt took place approximately one year ago, and the results have been commendable. This innovative belt has demonstrated remarkable resilience and efficiency, making it a valuable asset to the operation.

### Client Feedback:

"With the continuing success of the ProTOUGH belts we've installed, we are eager to explore options for our product belts that have been experiencing premature failures on both the top and bottom covers."

This feedback underscores the importance of not only selecting the right belt but also continually assessing and improving belt performance to mitigate failure rates and enhance operational efficiency.



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