

Australian Mining **safer to work**

THE FIRST PRIORITY FOR AUSTRALIA'S MINING INDUSTRY

ISSUE 25 - MAY-JUN 2023

Gauging safety

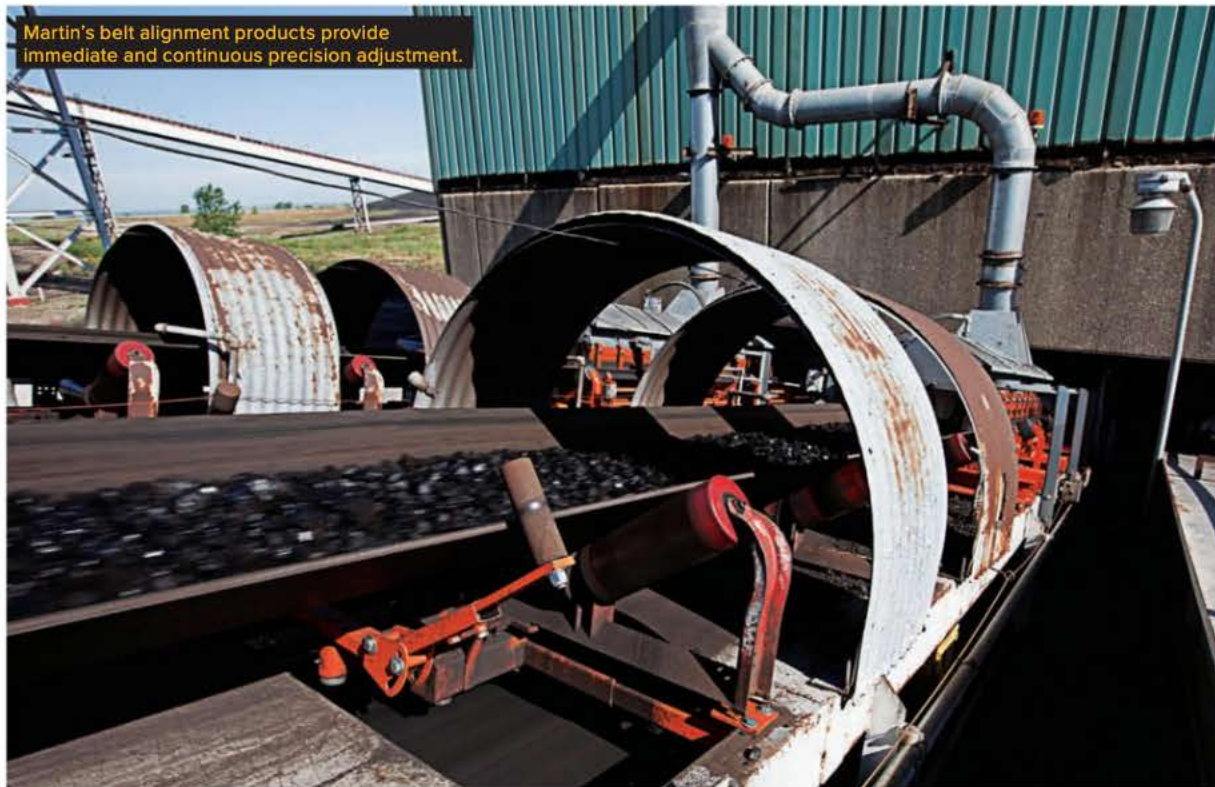
Helping to educate a new generation of maintenance specialists

OFFICIAL MEDIA PARTNERS



Bulk material handling ▲ Collision avoidance ▲ Safety materials ▲ Protective gear

Bulk material handling



Martin's belt alignment products provide immediate and continuous precision adjustment.

In perfect alignment

MIS-TRACKING CONVEYOR BELTS CAN CAUSE UNWANTED DOWNTIME, SIGNIFICANT PRODUCTION DELAYS AND MAJOR SAFETY PROBLEMS. MARTIN ENGINEERING IS MORE THAN CAPABLE OF SOLVING THE ISSUE.

Martin Engineering is more than an equipment supplier – it's a problem-solver dedicated to ensuring conveyor systems run effectively and efficiently.

Martin's belt alignment products provide immediate and continuous precision adjustment that ensures conveyor belts remain perfectly tracked and able to withstand the stress caused by wider and thicker belts carrying heavier loads at higher speeds.

The company's belt tracking products are renowned for preventing edge damage while extending the

life of the belt, reducing material spillage, minimising wear and tear of equipment, and increasing safety.

Martin manufactures trackers that can sense the direction of the belt movement and make the adjustments needed to keep conveyors correctly centred.

"In my experience, most belt tracking problems are related to misalignment," Martin Engineering Australia application engineer Marcelo Silvestre told *Safe to Work*.

The Martin Tracker provides immediate and continuous adjustment through the deployment of a patented steering system. The Tracker has four

main sections: steering roll, torque arm, parallel stay and guide rolls.

As the bell contacts the guide rolls the torque arm pivots the steering roll, causing the bell to track to the centre of the conveyor structure.

"The Tracker has been designed to keep the belt in alignment with continuous automatic adjustments," Silvestre said.

The Tracker works where other belt training devices can fail by significantly reducing edge damage, preventing spillage and extending belt life.

"When loads remain centred, there is less spillage and this leads to productivity gains, substantially

lowering costs, as the conveyor doesn't need to be shut down for manual cleaning to occur," Silvestre said.

The Tracker is designed to withstand significant mis-tracking forces, especially if the distances of a conveyor systems pulleys are less than ideal.

The Tracker is available in three models, or duty ratings, to match the requirements of each application.

The Tracker is highly capable under typical industrial material handling conditions; the Tracker HD has been developed to withstand the significant stress associated with wider and thicker belts moving at higher speeds and carrying heavier material loads; and the Tracker XHD has been engineered to operate under the most extreme applications.

Martin's Reversing Tracker features sensing rollers and lever arms located on both sides of the unit. It's available with stainless steel paddle wheel or air cylinder to activate the sensing rolls on the proper end of the unit.

Martin's Idler Aligner provides a safe method to manually fine tune self-adjusting idlers. This unit eliminates the need to tie off idlers to the surrounding structure while allowing

workers to make manual adjustments safely and conveniently from outside of the stringer.

The Idler Aligner features a hole for the placement of a padlock to restrict access.

Installation of this unit is a one-person job, as it requires no measuring, cutting or heavy lifting. But help is available if it's needed.

"Martin's technicians and engineers are available to provide expert advice, as well as detailed assistance on conveyor system products for their customers, and can also respond to other bulk material handling issues," Silvestre said.

An example of Martin's engineers solving a belt alignment problem occurred recently at Minera del Norte's Cemesa iron ore mine in central Mexico, when the operation was experiencing serious tracking problems with the conveyor belt leading from the primary crushing area.

After drifting into constant contact with the frame, longitudinal tears formed on the belt, which reduced the usable width from 36 inches (914mm) to 32 inches (812mm). This caused spillage and lowered the production volume.

The company was replacing the 170-foot (52m) belt monthly, at a price of approximately \$US140 per metre. Personnel also had to be hired to inspect and report on misalignment, adding further to the expense.

Cemesa invited technicians from Martin to provide a solution.

After a comprehensive technical survey, Martin's representative proposed installing four Trackers (two above and two below the conveyor belt).

Using the patented parallel steering/training system, the units automatically commenced making continuous adjustments to the belt path, preventing it from drifting.


After the installation of the Tracker units, the mine's operators reported prolonged belt health, consistent alignment, and no contact with the conveyor frame.

Since loads have remained centred, spillage has been reduced and the company has withdrawn the requirement for extra staff to undertake remedial work.

Cemesa has expressed its deep satisfaction with the outcome of the project and is more than aware of the benefits of implementing Martin's products and solutions.

It's clear that a key aspect of Martin expertise is its knowledge of the critical requirements to an evolved conveyor system and anticipating future production requirements.

Catering for maintenance-minded solutions across all aspects of a conveyor system, including the loading zone, can markedly improve safety outcomes and reduce downtime.

For Martin's technicians, the role of dust, spillage and belt tracking is significant, and that's why the correct engineering of safer and more productive conveyor systems is at the heart of the company's customer relationships. 



The Martin Tracker provides continuous precision adjustment through a patented steering system.