PROBLEM SOLVED™ PAPER

SOLUTION: Tail Pulley Protection - Martin® VPlow

INDUSTRY: Chrome

LOCATION: MPUMALANGA, SOUTH AFRICA

TITLE: Eliminating Tail Pulley Damage with an Effective Martin® VPlow Solution



Conveyor belt damage caused by material trapped between the belt and tail pulley

PROBLEM

This crushing and screening plant forms a critical part of a major ferrochrome smelting operation's metal handling and recovery process, where continuous material flow is essential for production. Fugitive material was being carried on the return belt into the tail pulley area because the existing tail pulley protection plough was ineffective. This resulted in conveyor belt damage, accelerated pulley lagging wear, and material build-up at the nip point, increasing maintenance requirements, reducing conveyor reliability, and creating a risk of costly equipment damage and downtime that the operation could not afford.

SOLUTION

A Martin Engineering Sales Engineer conducted a free Martin® Walk the Belt™ inspection, a service program in which conveyor experts assess the entire conveyor system, inspect components such as belt cleaners, tracking devices, and transfer points, and provide a detailed status report with recommendations for improvement. The inspection identified the ineffective VPlow from another supplier as the root cause of the carryback issue. Martin Engineering recommended and installed a Martin® VPlow 750mm, whose dual-anchor pipe design maintains consistent blade alignment and belt contact for effective removal of fugitive material from the return belt.



Installation of a 750 mm Martin® V-Plow, designed to maintain positive pressure between the plough and the

RESULT

Within three weeks of installation, all fugitive material was effectively diverted away from the tail pulley area, preventing material from being drawn into the pulley and causing damage. Martin Engineering's tail protection solution is specifically designed to remove material that accumulates on the inside of the return belt before it reaches the tail pulley. The lightweight split-frame of the Martin® VPlow enabled quick and straightforward installation while delivering reliable cleaning performance. The customer was highly satisfied with the product's performance.



Martin® VPlow keep material out of the tail pulley and prevent equipment damage

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