



PROBLEM SOLVED™ PAPER

SOLUTION: Primary HD cleaner and Secondary Cleaner

INDUSTRY: Coal

LOCATION: Witbank, Mpumalanga, South Africa

TITLE: Solving costly conveyor issues with Martin Engineering's cleaning system



Excessive Spillage under the structure



QB1™ Cleaner HD installed at the head pulley



Martin® SC16 Secondary Cleaners installed

PROBLEM

A leading provider of advanced coal processing solutions, serving the coal mining industry in Mpumalanga, South Africa, was facing significant challenges at one of its discard and processing plants due to an inefficient conveyor cleaning system on a critical belt. The challenges stemmed from both improper installation and lack of maintenance, resulting in severe chute blockages, carryback, and spillage under the conveyor structure. The poorly installed scrapers caused material to accumulate, blocking the chute and impeding the flow. This led to operational inefficiencies, increased maintenance time, and heightened safety risks. Neglecting regular maintenance further aggravated the problem, as the cleaning system deteriorated over time without any adjustments or improvements.

SOLUTION

An expert Martin Engineering engineer recognized the critical need for an effective cleaning system by installing both a primary and secondary cleaner. Installed on the head pulley, the Martin® QB1™ Cleaner HD was specifically chosen for its ability to provide reliable cleaning close to the belt's discharge point. Complementing the primary scraper, the SC16 secondary cleaner was installed to deliver additional cleaning further down the belt, effectively capturing any residual material on the return side. Using both primary and secondary belt cleaners offers a comprehensive cleaning solution crucial for maximizing conveyor efficiency. This dual approach ensures thorough cleaning, minimizes carryback, and reduces maintenance needs.

RESULT

Two weeks after installation, the engineer conducted a site visit which revealed immediate improvements. The chute blockage was resolved, allowing material to flow freely, while carryback and spillage were eliminated. This created a cleaner, safer work environment, restored operational efficiency, and reduced the need for remedial, reactive maintenance. The solution highlights Martin Engineering's commitment to effective conveyor cleaning through quality products and proper installation.