



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® QC1™ HD Primary Cleaner, SQC2S™ Secondary Belt Cleaner

INDUSTRY: Biomass

LOCATION: France

TITLE: ATEX-Compliant Belt Cleaning Solutions for Safety and Efficiency



Bagasse material handling poses dust explosions risks, requiring ATEX-compliant equipment to ensure safety.



Martin® QC1™ Primary Cleaner HD enhanced belt cleaning efficiency while reducing maintenance costs.

PROBLEM

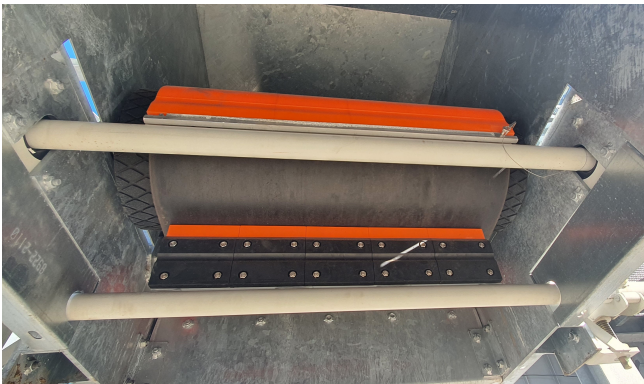
A biomass fuel plant in France faced a critical challenge in ensuring that all conveyor systems were fully compliant with the EU's ATEX safety regulations governing equipment used in explosive atmospheres. Given the high combustibility of biomass materials, particularly bagasse, there was an increased risk of dust explosion if any equipment failed to meet ATEX standards. The presence of non-compliant components could introduce ignition sources within the facility, posing severe risks to members of the workforce, asset integrity and processing continuity. It was therefore essential to implement conveyor solutions that adhered to ATEX compliance requirements.

SOLUTION

To address the critical need for ATEX-compliant conveyor solutions and mitigate the risk of dust explosions, Martin's engineers recommended a belt cleaning system comprising the Martin® QC1™ HD Primary Cleaner and SQC2S™ Secondary Belt Cleaner. The QC1™ HD features a high-performance, heavy-duty curved urethane blade for efficient primary cleaning, while the rugged SQC2S™ secondary cleaner is built to withstand the tough conditions of biomass handling, including high-speed belts and heavy loads. Together, these ATEX-compliant cleaners minimize material carryback, reduce maintenance costs, significantly lower the risk of dust accumulation and ignition sources in explosive environments.

RESULT

The customer was highly satisfied with the significant improvements in material control and system performance, noting a significant reduction in carryback and spillage at critical discharge points. Additionally, the integration of sealing systems at transfer points, V-plows, and belt trackers effectively prevented fugitive material escape, further reducing dust generation and fire hazards. Following the success of the initial project, the customer placed additional orders for three similar installations reaffirming their confidence in Martin Engineering's solutions.



The rugged SQC2S™ secondary cleaner is built to withstand the tough conditions of biomass handling