



# PROBLEM SOLVED™ PAPER

**SOLUTION:** CleanScrape® Belt Cleaners

**INDUSTRY:** Steel

**LOCATION:** ArcelorMittal, Fos Sur Mer, France

## PROBLEM

The ArcelorMittal steel plant was experiencing carryback issues on its raw iron ore conveyor leading from the loading dock to the plant. The conveyor is 1800mm (70 in.) wide with a belt speed of 4.5m/s. It runs continuously as the cargo ships offload. Material adhered to the belt and passed easily under the primary cleaner, dropping along the return belt path, resulting in spillage issues and significant product loss. Workers had to clean walkways and around the discharge zone, raising the cost of operation. The need to clean around a moving conveyor also posed a potential workplace hazard. To reduce the volume of carryback and the number of man-hours spent cleaning, managers decided to seek a more effective solution to belt cleaning.

## SOLUTION

Technicians from Martin Engineering France examined the system and recommended a CleanScrape® Primary Cleaner HD (heavy-duty) and a CleanScrape® Secondary Cleaner. Installed at an angle across the discharge pulley, the primary cleaner is designed for the most punishing bulk handling environments. It is equipped with tungsten carbide tips that are safe for use on mechanical splices due to the minimal pressure on the belt. After initial tests and a single re-tensioning, it requires no further adjustment and lasts up to 4x longer than standard polyurethane blades. The CleanScrape Secondary Cleaner features a stainless steel assembly and carbide tipped blades. The unit removes leftover fines on the belt to further reduce carryback.

## RESULT

Following installation, the results were immediately apparent as the CleanScrape primary and secondary cleaner system eliminated the vast majority of the adhered cargo, leaving the return side of the belt carryback-free. The cleaning schedule was reduced to only routine sessions as needed. Operators report that the solution has drastically reduced the amount of product loss due to carryback. With less labor for cleaning, the cost of operation has also been reduced, further improving the return on investment (ROI) on the equipment. Managers are pleased with the outcome and continue to work with Martin Engineering on solutions in other parts of the operation.




The damp, dense cargo contributed to adhered material clinging to the belt.



The unique design of the CleanScrape Primary Cleaner contributes to its effectiveness and long service life.



The CleanScrape Secondary Cleaners also significantly reduce dust emissions on the return path. 

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