

CASE HISTORY



PULP & PAPER: CONVEYOR TRANSFER POINT INSTALLATION *The Fundamentals of a Clean, Safe, and Efficient Conveyor*



**Conveyor Transfer Point Products Reduce
Dust and Fines Pollution**

INTRODUCTION

This job story focuses on the need to control dust and air movement at Conveyor Load Zones in facilities that process bulk solids and experience operational, safety, and morale problems at transfer points because of escaping fugitive materials. The facility in this case study is a leading paper mill located in the Middle Atlantic States. While the plant is primarily dedicated to the paper-making process, an area is reserved for processing coal used to power the plant.

PROBLEM IN MORE DETAIL

The area inside the coal transfer tower suffered from substantial volumes of turbulent air being generated at the transfer point from the Crusher to the Coal Conveyor. This resulted in pressurized airborne dust escaping the transfer point and covering the surrounding area. Wheelbarrows were being filled several times a day with the powdery dust that covered the floor, railings, and other nearby surfaces. Sweeping and daily cleanup were consuming an increasing amount of worker time and effort. On top of this, the escaping material also resulted in rapid skirt wear, belt mis-tracking and other conveyor maintenance problems, as well as worker safety and morale issues.

SOLUTION

AIRMATIC Application Specialists surveyed the situation and proposed the purchase and installation of a variety of MARTIN® Conveyor Products to eliminate the problems. First, a Belt Support System was installed to prevent the belt from sagging and allowing fugitive material to escape along the sides of the belt line. Next, Belt Tracking Devices were installed on both the carrying and return sides of the belt to reduce the belt alignment problems. Abrasion-Resistant, Externally-Adjustable Wearliners (to compensate for eventual wear) were installed as well, and the existing manually-adjustable skirting was replaced with a unique double lip Self-Adjusting Skirting to keep the edge sealed. Finally, a high volume "passive" Dust Settling Zone with multiple dust-trapping curtains was installed on top of the existing chutewalls to slow the air velocity. This solution enabled dust and fines from the conveyed product to settle which meant cleaner air exited the chute outlet. Within weeks after installation, the plant manager commented that the job of cleaning up the fugitive material went from several wheel barrows per day to less than one per month, and that his operators can now use a broom to periodically sweep-up rather than the laborious and unsafe job of shoveling up spilled coal in a dust-laden environment.

CONCLUSION

As this case study shows, the paper mill's nagging conveyor problems were eliminated with the installation of MARTIN® Transfer Point Products. The Mill can now process coal without airborne dust and fines escaping from the conveyor loading zone, thus reducing maintenance and downtime costs, and improving worker safety and morale. After more than a year, there have been no significant problems since the installation was completed.

For more information on Conveyor Transfer Point Products and other products and services provided by AIRMATIC INC, [click here](#).

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