



Transfer Chute & Conveyor Upgrades for Dryer Collection System

PROBLEM SUMMARY

A pellet mill in North Carolina was struggling with a dryer collection system load chute that was not performing. The poor design resulted in excessive dust and spillage. A crew of 3-4 personnel for approximately three (3) hours per day was needed for scooping, sweeping, and hosing the spillage area.

This in turn, led to demanding and costly housekeeping routines and corresponding safety issues. The plant asked Benetech to provide a solution that would achieve the following goals:

- Reduce dust and spillage
- Reduce labor and expense for housekeeping
- Reduce plant maintenance expenditures
- Reduce plant risk profile based on excessive dust, spillage, and related safety concerns
- Improve belt life
- Increase employee morale and overall safety

BENETECH SOLUTION

Benetech provided a scan of the transfers and then utilized their experience with material handling systems and transfer point design to increase operational efficiency and provide a cost-effective solution.

Over three phases, Benetech custom-engineered and installed:

- 1. MaxZone® Load Zone System** — A belt enclosure system with easy-to-access, externally adjusted skirtboards; internal wear liners; dust curtains designed to disrupt air flow streams and prevent dust escaping the enclosure; and rubber skirting to prevent dust leakage along the sides of the conveyor.
- 2. MaxZone Plus®** — A modified load zone chute designed to accurately align material onto the conveyor belt thus reducing dust
- 3. Simple Slide Idlers** — Roller frames that slide into place without the need to remove adjacent idlers, resulting in excellent serviceability and improved safety.



BEFORE



AFTER

IT PAYS TO IMPLEMENT BENETECH SOLUTIONS

- Prior to installation, the plant was spending approximately 3 hours per day cleaning up excess spillage
- Post install, spillage & housekeeping was reduced by up to 99%: \$90,000 per year savings
- Satisfied OSHA and federal regulations
- Improved system capacity and reliability: \$50,000 per year savings by reducing downtime
- Total yearly savings: \$140,000+

Benetech provided best-in-class belt support critical to the performance of the containment system (skirtboard and enclosure above the belt), including simple slide idlers and belt trackers. Minimizing belt oscillation and providing a flat level surface for the belt to be loaded was critical.

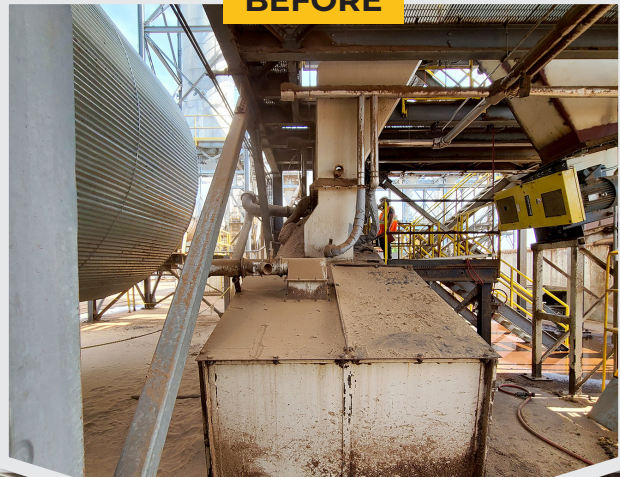
SUCCESSFUL RESULTS

After completion of all three phases, the plant affirmed that all preliminary goals were met. The plant has since experienced an extreme reduction in dust and spillage, and housekeeping demands have been reduced significantly by up to 99%.

BEFORE



BEFORE



AFTER



AFTER



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