PULP & PAPER

SUCCESSSTORIES

Wood Chip Handling SYSTEM UPGRADES

PROBLEM SUMMARY

At a pulp and paper plant in Canada, a conveyor system faced operational challenges including pluggage, dust, and material spillage. To resolve these issues, Benetech proposed a comprehensive system upgrade to reduce dust, prevent spillage, and improve material flow.

BENETECH SOLUTION

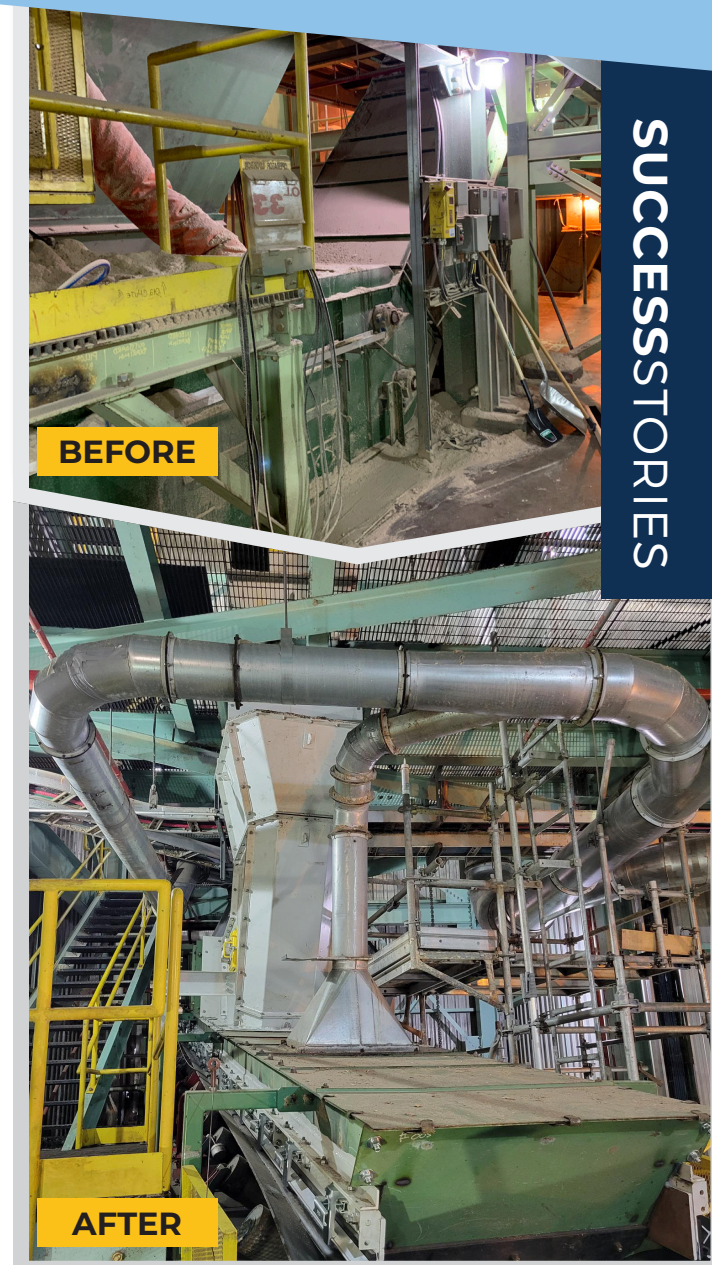
Benetech conducted a site visit and performed a 3D point cloud scan to assess the plant's existing conditions. Based on this assessment, Benetech recommended a solution centered on replacing the existing conveyor with a 48-foot-long incline conveyor system featuring an eight-foot discharge height. This new system was designed to efficiently transport 45 tons per hour (TPH) of 15-20 PCF wood chip fines at a 75% belt load and a speed of 200 feet per minute (FPM).

To ensure durability and operational efficiency, Benetech incorporated key components such as XN Liners, Simple Slide Idlers, inspection doors, head pulley/shaft, tail pulley/shaft, drive and tail guards, and manual screw-type take-up that could utilize the existing drive system.

In addition to the conveyor replacement, Benetech modified the plant's existing loading chutes to align with the new system. Enhancements included the installation of a head discharge chute flanged to match the existing drag conveyor's load point and the integration of BEP1 Primary Belt Cleaners and BES1 Secondary Belt Cleaners featuring rubber blades with tungsten carbide tips. A plugged-chute sensor cutout was also installed on one of the inspection doors to enhance operational monitoring.

Benetech products included, but were not limited to:

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



IT PAYS TO IMPLEMENT BENETECH SOLUTIONS

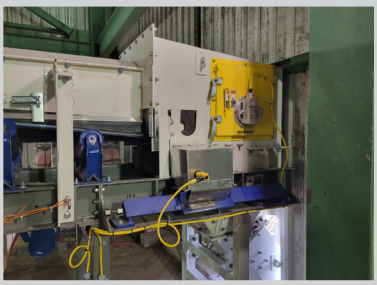
- Improved operational efficiency by significantly reducing material pluggage and fugitive dust
- Upgraded system features improved blockage detection and easier maintenance access, reducing operational risks
- Cost savings from reduced downtime, minimized maintenance, and durable product upgrades

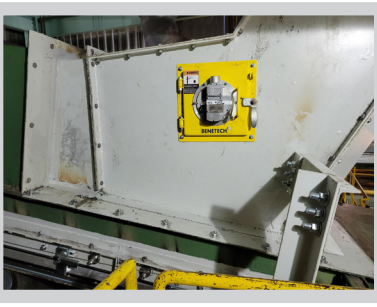
flow streams and prevent dust escaping the enclosure; and rubber skirting to prevent dust leakage along the sides of the conveyor.

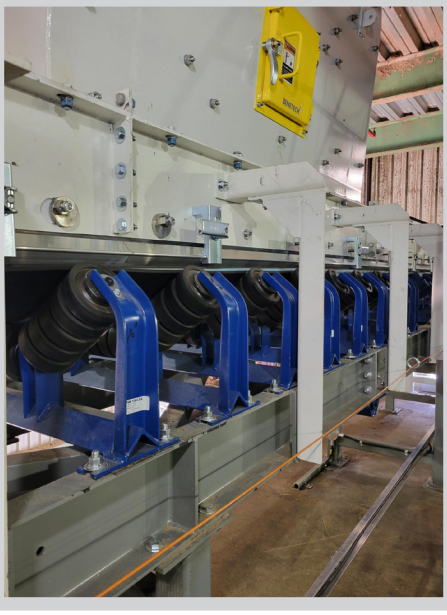
2. **Simple Slide Idlers** — Roller frames that quickly slide into place without the need to remove adjacent idlers, resulting in excellent serviceability and improved safety.
3. **Inspection Doors** — Dust-tight doors that minimize airborne dust and spillage while also allowing full access for service and maintenance
4. **BEP1 Primary Cleaner** — A belt cleaner with an abrasion-resistant polyurethane blade that stays in constant contact with the belt for an efficient clean.
5. **BES1 Secondary Cleaner** — A belt cleaner at the center of the belt with a one-piece rubber blade with carbide tips featuring flaps that ensure carry-back slides away from the belt.

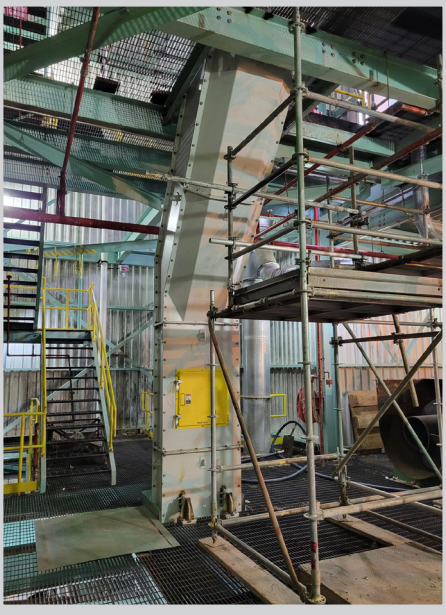
SUCCESSFUL RESULTS

The newly installed conveyor system delivered outstanding performance. Material flow improvements were immediately noticable, with centered loading that effectively transferred onto the chain conveyor. The sealing system functioned seamlessly, eliminating previous concerns related to dusting and spillage. Plant personnel were highly impressed with the conveyor's efficiency, with many coming to observe its operation firsthand. At the time of project completion, no outstanding issues were reported, underscoring the success of Benetech's solution.









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