World's First Dual Drive Tube Conveyor Creates New Opportunities and Capabilities

A Case Study

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Objective and Past Equipment

When other bulk material transfer methods came up short, a leading food manufacturer turned to MPE's conveyance expertise to bridge the gap between two processing facilities, saving $6 million annually.

Transport distance of 450 ft between two seperate buildings with heat tracing.

As a key step in their operations, the global company needed to move 25,000 lb of product every hour from their processing facility to a second building housing the finished food operations 500 ft away.

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Needing a better way to convey, MPE was engaged to develop a unique solution which would meet their specific needs.

"When conveying a fragile product these distances, outdoors, with critical product specifications and downstream implications there are a lot of things to consider. It was a daunting undertaking but at the end of the day, these are the design problems we enjoy taking on to support our clients and improve our product offering", notes Chain-Vey Product Manager, Andrew Willse.

Chain-Vey Solution

The costly production bottleneck was met with an innovative dual-drive design offered on the Chain-Vey tubular drag conveyor—already the world's leading tubular conveyor with over thousands of food process installations in North America alone.

MPE Chain-Vey engineers designed a 6-inch diameter conveyor with a total circuit length of 1,000 ft. This dual-drive Chain-Vey would have the following specs:

- A planned conveyance throughput of 25,000 lb/hr of fragile product
- Transport distance of 500 ft between two separate buildings
- Zero breakage (< 1%)
- Running outside, the Chain-Vey is fully insulated with heat tracing
- Two drive motors, one at each end, with a patent-pending PLC system to distribute the pull force evenly
- Operational 24 hours a day, 7 days a week
- Quiet and low energy consumption

"We knew we had the right pieces of the puzzle with our Chain-Vey Conveyor technology. Tubular drag conveyors are extremely gentle on fragile products and our sanitary conveyor designs eliminate product contamination such as black build up. Two factors in doing this was the tensile strength of the chain link and the ability to start and stop under full load. This was the starting ground and the key was developing a way to balance energy efficiency and providing enough horsepower to move product across 500 feet with one system. The dual-drive design allows the customer to automate their process across long distances without compromising product integrity" states Alex Wolf, Chain-Vey Sales Manager.

The dual-drive Chain-Vey proves to be a huge success. Plant managers have completely freed up labor, reduced product breakage to nearly zero, and have experienced no downtime whatsoever.

"This Chain-Vey runs exactly as promised. We're very satisfied with it," says the maintenance engineer at the facility.

To learn more about Chain-Vey and the dual drive option, visit chainvey.com or call +1-773-839-4337.