



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Transfer Chute Technology

INDUSTRY: Bulk Transportation

LOCATION: Kinder-Morgan, Vancouver Wharves
North Vancouver, BC Canada



Martin designed and installed five new conveyors at the Vancouver Wharves Kinder Morgan terminal, ranging from 105 feet (~32 meters) to 709 feet (216 meters) in length.



The new transfer points employ a "hood and spoon" transfer to place material onto the belt being loaded.



All mineral concentrate storage and handling facilities are fully enclosed to ensure no concentrate escapes or migrates into the ocean.

PROBLEM

Kinder Morgan is the largest independent terminal operator in North America, with 180 locations. The Vancouver Wharves terminal in North Vancouver, BC delivers inbound and outbound services to shippers moving cargo between all regions of western Canada, handling mineral concentrates, liquids (diesel and jet fuel), sulfur and specialty agricultural products. The terminal handles more than 600,000 metric tons of mineral concentrate per year across five different storage buildings.

SOLUTION

Kinder Morgan approached Martin Engineering to upgrade several transfer points to help increase throughput and reduce dust. To address the specific requirements and design the optimum containment, Martin conducted a site survey, followed by a conveyor risk assessment. The strategy that emerged gave Martin responsibility for the design and fabrication of five transfers, as well as supervising the installation.

The new conveyors range from 105 feet (~32 meters) to 709 feet (216 meters) in length, and either 42" (106.68 cm) or 48" (122 cm) wide. Average speeds range from 177 feet per minute (0.9 meters per second) on the shortest run to 565 FPM (2.87 MPS) on the longest conveyor. Liner materials were installed on all five transfer chutes to resist abrasion and extend service life.

RESULTS

"We were pleased by the level of support we received from Martin Engineering, without having to hound anyone. And we were impressed by the fact that when we did the initial start-up, it was the guys who helped design the equipment who were there to oversee the start-up," said K-M Engineering & Project Development Manager Al Price-Stephens.