PROBLEM SOLVED™ PAPER

SOLUTION: Martin® DT1 Cleaner XHD

INDUSTRY: Mining & Transportation

LOCATION: Shiploading Facility, Quebec Cartier Mining (QCM)
Port-Cartier, Quebec, Canada

Carryback created problems for the reclaim conveyor in the QCM Shiploading Facility.

The life cycle of the blades for the Martin® DT1 Cleaner XHD has been roughly 3 years per set.

PROBLEM

QCM moves an average of 8.5 million tons of iron pellets per year through its shiploading facility.

QCM can load iron ore pellets to fill one large ship or three smaller "laker" vessels in a 24-hour period with this 856 fpm (4.45 m/sec) conveyor.

The reclaim conveyor was creating so much carryback that the workers had to wash down the structures and pivot rail system between each shipload. This could be done without problems from April to December, but was impossible during the winter months.

Carryback would build up and create problems, including derailment of the tower, broken rails and wheels, broken gear teeth and electrical problems.

SOLUTION

A Martin® DT1 Cleaner XHD with Dual Spring Tensioners from Martin Engineering was installed on this 72-inch (1828 mm) belt. To extend blade life, Martin Engineering's "brown" chemical-and water-resistant high performance urethane was selected.

RESULTS

Belt cleaner performance has been more than satisfactory, removing material well above the plant's expectations.

Carryback has literally been eliminated to the point where workers now wash down the reclaim conveyor only twice per year, and that is merely to improve its appearance.

Maintenance requirements have been minimal, with the cleaner requiring re-tensioning roughly once per year.

The rugged belt cleaner blades have provided an extended service life. Despite the high 8.5 million tons per year conveyed on the reclaimer, the original blade set lasted more than two years.