PROBLEM SOLVED™ PAPER

SOLUTION: Martin® PV Cleaner and Twist™ Tensioner

INDUSTRY: Aggregate

LOCATION: North American Limestone Corp. 243 Complex Cloverdale, IN

A major savings in time and cost made the PV Cleaner with Twist™ Tensioner more than worth the investment.

The PV Cleaner allows for "one-pin, no tool" blade replacement and contains 20% more urethane.

NALC was recognized as a Certified Safe Feed/Safe Food Facility.

PROBLEM

North American Limestone Corporation's 243 Complex supplies crushed and fine limestone products to a wide range of industries in the Midwest that includes animal feed producers, electric power generation, coal mining, industrial manufacturers and various construction segments. At the 243 Complex, a significant amount of material was being carried back along the underside of the conveyors. This carryback would accumulate and create mounds of spillage that would pile up in excess amounts causing operational issues. For safety reasons and to increase production, the crew was required to shovel and wash carryback spillage daily meaning costly and time-consuming clean-ups. Thus, worker fatigue increased and productivity decreased because at least two hours of everyday was spent cleaning.

SOLUTION

One efficiency-gaining method that NALC employed was the use of the Martin® PV Cleaner with a Twist™ Tensioner on many of its belts throughout the quarry. The belts were used to move rock to and from the crusher, and also product through its fine grind operation. The belts run at speeds between 100 feet per minute to 400 feet per minute, are two ply to four ply and utilize mechanical splices. With all of these demands, the cleaners are able to effectively remove the residual material. The PV Cleaner has an aggressive angle of attack to the belt for improved cleaning efficiency. The PV Cleaner blades feature the patented Constant Angle Radial Pressure (CARP) design for consistent cleaning throughout all stages of the blade life. This belt cleaner and tensioner combination also helped to eliminate material buildup on the return rollers, which got trapped on the return side of the conveyor belt and caused problems.

RESULTS

NALC found that the Martin® PV Cleaner with a Twist™ Tensioner, almost completely eliminated carryback and spillage. According to the belt maintenance crews, the time and cost savings was an immediate return on investment. Another important discovery is that the mechanical splices installed within the belts were able to run smoothly without any damage to the cleaner or belt. The cleaners and tensioners have been on the belts for over a year now, and since installation, they have not had to be replaced - a true cost savings.

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