



Cleaner belts for Fulton Hogan

Having trouble with significant amounts of material being carried back along the underside of your conveyors? Fulton Hogan's Poplar Lane quarry in New Zealand found a solution.

Clear-headed analysis, a carefully worked out strategy and a close partnership between quarry management and its technology supplier, Flexible Steel Lacing Company (Flexco), have seen Fulton Hogan's Poplar Lane quarry production nearing its full potential.

The Poplar Lane quarry is not far from Te Puke, in New Zealand's Bay of Plenty. The crushing operation had been performing well but with obvious capacity to be doing better.

Several issues had kept Poplar Lane from its full development. It had its problems following the commissioning of a modified plant.

Significant amounts of material were being carried back along the underside of the conveyors. This would accumulate and foul the conveyors return rollers, structure and the ground underneath. In turn this meant costly and time-consuming clean-ups for the plant's operators.

Added to the problems were the conditions coming into play when the weather was cold and wet. The main belts were prone to regular slippage, because of inadequate drum lagging materials. The result was predictable; less production capacity and potential spillage at transfer points.

The heart of the problems lay in the combination of the belt speed and the limited space between the feed conveyor's head pulley and the radial stacker conveyor's loading point.

This had positioned the existing cleaners directly in the path of the material flow. Wear rates on cleaner tips were accelerated, forcing replacements as often as each week.

In February 2000 Lee Brightwell, field sales engineer at Flexco became part of a team with Maurie Cotter, quarry manager at Poplar Lane, to study and solve the problem.

The proposal was to implement a trial of the Flexco Eliminator HV Series Pre-Cleaner, one mounted directly onto the conveyor's head drum. The preferred cleaner was to be installed on the feed conveyor system. The Eliminator HV Series cleaner was chosen from Flexco's broad range of conveyor belt cleaning systems. These cleaners have a robust and compact construction and the low profile of their tips kept them positioned



Flexco's Eliminator HV Series Pre-Cleaner

below the flow of material. In turn this would increase tip life, improve cleaning efficiency, reduce down time and attack the additional costs attributed to tip change outs.

There was a thorough evaluation process. The end result, the Eliminator HV series cleaner was seen as a natural fit for Poplar Lane.

It was also clear the existing rubber lagging needed to be removed. The Flexco-supplied Flex-Lag ceramic pulley lagging was installed to provide an increased coefficient of friction and eliminate the previous problems with belt slippage.

The benefits have been immediate. The days of starting up and having to throw sand and gravel on the pulley surface to provide an increased coefficient of friction and eliminate previous problems with belt slippage, have gone.

The Flex-Lag's high-friction coefficient has eliminated this, delivering a performance close to double that of standard rubber lagging.

This installation was completed in February 2000. By the end of the following month the results were in. Material carry-



The Eliminator has helped reduce mess on the plant floor

back was dramatically reduced, with between 85-90% reduction in material carry back.

Operators did not need to be diverted into peripheral tasks, leaving them clear to focus on the prime business, producing large quantities of quality product.

A close working relationship between Flexco and Fulton Hogan's Poplar Lane quarry ensures ongoing monitoring for continuous improvement. By now it was estab-

lished this had been a win for all concerned.

The tips installed in 2000 are still in service, with an estimated 12-18 months ahead before tip change out is indicated.

The success of this exercise has seen the installation of other Flexco cleaners throughout the Poplar Lane plant, including additional head drums being re-lagged with Flex-Lag ceramic to add to the significantly increased productivity. **Q**