

HOLCIM BC28 & 36 QUARRYMASTER

HISTORY

After extensive geological and planning work, Milburn Aggregates were granted resource consent in 1993 and commissioned a new plant to be built 50km south of Auckland at the top of the Bombay Hills. The new plant was fully operational in 1998. Applied Conveyor was not involved in the initial contract for supply of conveyor belt as we did not open our doors until October 1998. We were invited to the site in early 2002 to evaluate some structural changes to the plant. Applied Conveyor had worked with the manager on conveyor issues at previous quarries. Applied Conveyor has a reputation for reliable service and Fenner Dunlop belt has a proven reputation for superior quality. This is supported by other Milburn plants using Fenner Dunlop belt and achieving great results.

SITUATION

BC28 and BC36 are both reclaim tunnel conveyors with approximately 100meters of 750mm wide belt, BC28 conveying Basalt rock 150mm -40mm and BC36 conveying -40 mm. The original belt supplied was 4ply PN150 5x2 'N' of either Korean or Taiwanese manufacture. This belt lasted a little over 18months in this tough application. Over the 18months both belts had 4-5 splices and numerous repairs, the belt finally got to be too unreliable for such long

conveyors. BC28 was replaced in March 2002 and BC36 in August 2002, both with Fenner Dunlop belt, standard Quarrymaster II PN630/4 6x2 covers. As of December 2005 both of these belts had not required any repairs, splices



or caused any downtime in 44 and 40months respectively in addition to the savings below sections of each conveyor belt were used on other conveyors, extending the old belts life for up to 12months.

CONCLUSION

A quality belt allows a better quality splice, more resistance to rock damage and increased plant availability. Other benefits not quantified were, plant staff set goals for themselves to increase production volumes by looking for potential hazards that could cause downtime and attitude to house-keeping improved, major factors in reducing downtime and extending plant and equipment life.

Belt	Supplier	Length	Price per/m	Life months	Effective price per/m	Belt price for 40 months	Splice cost for 40 months	Total cost
4P PN150 5x2 BC28	Korean/Taiwanese	104	\$59.00	18	\$131.11	\$13635.42	\$5600.00	\$19235.42
QMII PN630/4 6X2	APEX FENNER	104	\$97.00	40	\$97.00	\$1088.00	\$900.00	\$10988.00
4P PN150 5x2 BC36	Korean/Taiwanese	104	\$59.00	18	\$131.11	\$13373.22	5600.00	\$18973.22
QMII PN630/4 6X2	APEX FENNER	104	\$97.00	40	\$97.00	\$9894.00	900.00	10794.00