



# AssetCare Counts #9

## Minimise costly and unplanned downtime

► The ALS Industrial patented Vibration Analysis system can assist you in minimising plant downtime and maximising efficiency.

Vibration analysis is a proven technique for assessing the condition of plant equipment without costly interruptions to plant operation. Through this technique, unplanned failures can be avoided and damaged components can be changed out shortly before failure, maximising their operating life.

A recent example of the benefits of an ALS Condition Monitoring survey comes from a Coal Preparation plant. A stockpile conveyor, crucial to the operation of the plant, showed inner race bearing damage that was diagnosed by vibration analysis. The severity at that time was low enough that there was no danger of imminent failure. The bearing continued in operation, with flushing of the bearing lubrication advised as a precaution.

The next survey four weeks later showed a 292% increase in the vibration levels indicating that the bearing was exhibiting a fast failure mode. Bearing replacement was recommended and scheduled for the next maintenance window two weeks later. Spare parts and labour were organised in advance leading to no unscheduled down time.

Failure of this bearing would have resulted in the preparation plant shutting down until repairs could be affected. This would take a minimum of six hours if labour and parts were available. The cost of lost production in a plant such as this runs to many thousands of dollars per hour.

Furthermore, failure of this bearing could also have damaged the entire tail drum and/or conveyor belt, leading to additional repairs works and lost production time.

The avoided down time savings dwarf the actual costs of the vibration analysis survey itself.

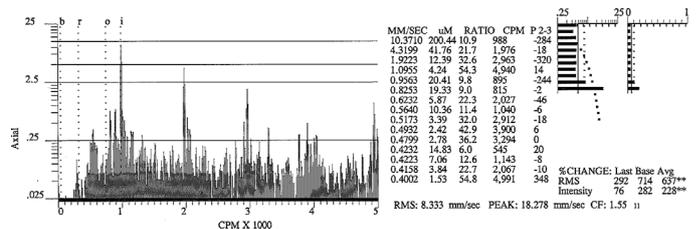


*Inner Race Bearing Damage*

ALS Industrial employs vibration analysis technologies that allow rapid data collection so that many machines like the above conveyor can be surveyed in a single days site work. The data is promptly analysed and ALS

interpretations and recommendations are delivered to the customer via an online portal, where reports are retained for 24/7 customer access.

Vibration analysis is supplemented by additional condition monitoring services, including thermography, oil sampling and analysis, advanced non-destructive testing techniques (NDT) and reliability engineering support.



*Vibration Analysis results for the damaged bearing*

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