

CASE **STUDY**

CONDITION MONITORING

**SOLUTION DELIVERS
PREDICTIVE
MAINTENANCE
BENEFITS AT SUPER
QUARRY**

CS118



HAYLEY

DEXIS

HAYLEY DEXIS

CONDITION MONITORING //

AGGREGATES

Focus on **value**

**TRACK
UP**

THE SITUATION

The Reliability Manager of a large quarry in the West of Scotland contacted the team at HAYLEY 247 DMS DEXIS to assist them with setting up a predictive maintenance programme for their remote, 309-acre site.

THE SOLUTION

A system of one gateway enclosure and 33 BluVib accelerometers were connected to three critical vibratory screen applications, to monitor vibration levels. Data from the sensors was compiled for analysis in the Asset Minder software, available to engineers within the on-site reliability team and condition monitoring specialists at HAYLEY 247 DMS DEXIS. Over a 4-week period, trends within the readings were established with the data also displaying a number of instances where components within the applications were behaving outside of acceptable parameters. This would enable early detection of mechanical faults.

In one instance, an exciter gearbox on a vibrating screen was displaying high levels of velocity, which had been identified in Asset Minder. A number of e-mail alerts had been generated by the system and received by the HAYLEY 247 DMS DEXIS team. Analysis was then undertaken from the resulting FFT Spectra, and the client was advised that there were signs of carbon shaft wear and potential gear damage.

KEY VALUE AREAS



SPEND



INCOME

An inspection of the gearbox and the drive assembly was arranged for the upcoming planned maintenance stoppage, when it was noticed that both the gearing and carbon shaft splines were damaged. Temporary maintenance activity was completed to keep the asset operating, until a replacement unit was ordered for installation during the following planned outage.

THE RESULT

The data insight provided by the condition monitoring solution has enabled the reliability team to plan and prioritise maintenance activity, acting as an early warning sign to faults which could cause damaging and costly breakdowns.

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**OVER 240 ASSETS
INCLUDING VIBRATORY
SCREENS, CONVEYORS
AND CRUSHERS
ARE NOW BEING
MONITORED.**

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CONTACT US!

Speak to your local HAYLEY DEXIS branch today!

You can find their details by using our online Branch Finder tool:

www.hayley-group.co.uk/branch-finder.

In the case of the damaged exiter gearbox, without the technology alerting engineers to the problem, the gearbox would have run to failure. This would have cost £44,000 in parts, labour and lost production.

The successes of the collaboration between HAYLEY 247 DMS DEXIS and the customer has resulted in an expansion of the monitoring profile on-site. Over 240 assets including vibratory screens, conveyors and crushers are now being monitored, utilising vibration, thermal imaging, ultrasound and more to collect more than 5,626 data points.

KEY SOLUTIONS

MachineGuard sensor technology.

Asset Minder condition-based monitoring software.

KEY RESULTS

Maintenance programme improved.

£44k costs avoided in a single job.

Insight into asset performance enabled.





HAYLEY

DEXIS