

STOCKAGE CLINKER –
TRANSPORTEUR AUMUND

Remote Vibration Monitoring utilising MSF vibration sensors are in use on the asset, which is an Electric Motor driving a Gearbox, analysis of the motor data revealed an increase a peak at 3x RPM indicating an alignment issue to the RDC Team.

THE PROBLEM

This is a critical asset to production, there is no redundancy therefore production stops if the equipment fails in service.

OUR FINDINGS

AVT Remote Diagnostic Centre Team in Kirkcaldy noticed an increase in the velocity and acceleration readings from the Motor and Gearbox Input, this was after the motor bearings had been previously replaced.

MACHINE SENTRY FIXED (MSF2)

The MSF2 can be used on a wide range of equipment, including compressors, pumps and motors as part of a condition monitoring programme.

- Frequency range of 1Hz to 8.5kHz
- Internal memory large enough to store more than 5000 readings
- High-speed data transfer via Bluetooth®
- Programmable data acquisition
- Replaceable battery
- Up to 5 years battery life
- Gas zone 0 and dust zone 20 certified
- Sealed to IP 67



The velocity spectra and trend had started to show an increase in levels in December 2024 and spectral data gave the RDC team cause for concern.

As the trending of the velocity levels and spectral content increased, the data collection frequency and analysis also increased. Given the criticality of this equipment, and the possibility of a catastrophic failure whilst in operation, AVT raised an Action note and contacted the customer to advise them to conduct an alignment of the coupling. AVT increased the urgency of this Action Note due to the vibration levels increasing daily.

In figure 1 we see the velocity spectra before the action was conducted to realign the coupling, Y axis range is set to 12 mm/sec. Figure 2 we see the acceleration spectra after the motor was replaced, Y axis range is set to 2.2 mm/sec.

The customer decided to install a new motor and coupling.

OUR APPROACH

At the time of this issue being discovered the asset, data was being collected once per day and analysed every 2 weeks, this was increased so that the data was being collected several time per days and analysed twice per week so that any further increase in trending or spectral content could be monitored. This then triggered that the Action Note priority was increased from medium to urgent.

Fig. 1



Fig. 2



FOLLOW UP

The new motor and coupling were fitted during a routine shutdown. Since the new motor and coupling were installed, the monitoring has returned to monthly. vibration levels then reduced to satisfactory levels.

Need advice?
Contact our experts

AVT Reliability Ltd Head Office
Unit 2, Easter Court, Europa Boulevard
Warrington, Cheshire, WA5 7ZB

W: avtreliability.com
T: +44 (0)161 486 3737
E: enquiries@avtreliability.com