

AILSA RELIABILITY SOLUTIONS LTD.

ABOUT US:

Ailsa Reliability Solutions Ltd are an independent organization, specialising in solutions to improve customers reliability and availability of their plant and assets, using the latest condition monitoring equipment and technology available on the market.

With over 20 years' experience in supporting customers, with various services, across a multitude of industry sectors, we know how crucial uptime of process related equipment is to any organisation.

At Ailsa we can test, monitor, analyse, report, and recommend solutions to critical items of mechanical and electrical plant to assure our customers of maximum uptime and availability and reduce costly downtime and unplanned outages, thus increasing customer productivity and profitability.

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CASE STUDY 2022:

BENEFITS OF ONLINE MBVI SYSTEM

The Challenge:

A key client has 2 off critical Boiler Feed Pump (BFP) systems on site which are now over 35 years old. These machines are critical to the operation of the site and if they fail would cost millions of pounds in lost revenue. ARSL provided the client with some mitigation systems to try and reduce the risk of unplanned failure to these key assets.

The Solution:

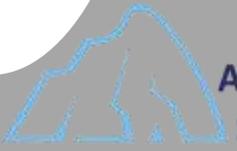
ARSL engineers installed an online continuous monitoring MBVI (Model Based Voltage and Current) measuring system onto the machine from the control cabinet. MBVI takes the voltage and current signatures and uses these to measure not only the electrical characteristics of the motor but displays the mechanical frequencies on all the upstream equipment within the system (gearbox and pump).

The Value:

During the first three months of the system being installed it picked up a change in state on the motor transmission (looseness/rubbing) and the motor bearings. As the ARSL team could go directly to the time when the problem developed, we could work with the client to see if there were any external factors that could be contributing to this type of rise in trend, physical changes to the machine, process changes etc.

This was the only machine available at the time of the fault developing so had to continue running. There were no external factors so ARSL monitored the trends until the other machine could be brought online and for this machine to be taken out for overhaul.

During overhaul it was found that the DE bearing housing was slack and if this issue had not been found, the machine would have experienced an unplanned failure. A failure to this machine would have cost the client hundreds of thousands of pounds in lost production until the second machine would be ready to be in operation.



FURTHER READING



Alarms coming through on the Ailsa Vision Platform

Trending of the alarms within Ailsa Vision



Analyzing the Data within the Analytical module of MBVI

Identification of problem frequencies and potential causes



By having the Ailsa Vision Platform installed, the ARSL engineering team were notified when the change in state occurred. This was monitored and then further analysis took place in the MBVI analytical software.

From both systems we could identify what the issue was, the date and time it started to develop and then trend the issue to ensure that the machine could continue running until the client could plan in for switching the operations to the other machine without process interruption.

Social Media:

