

METRIS VIBE A HEALTH CHECK FOR YOUR PLANT

To avoid unplanned plant shutdowns, it is important to know at an early stage when vital components need to be replaced or maintained. Condition monitoring enables operators to work proactively and keep shutdown time to a minimum.

Metris Vibe – an ANDRITZ sensor for systematic condition monitoring of vibration and temperature



HELPING MAXIMIZE PRODUCTIVITY, EFFICIENCY AND AVAILABILITY

Today's technology knows a lot about us – where we are, what we might be doing, how long we have been asleep, and what we are watching and listening to. When this data is fed to a digital assistant, it can offer us a range of helpful functions and tips designed to make our lives easier, more efficient, or healthier. The same goes for industry. Tracking devices can monitor and control a company's assets and plants, helping to improve performance with cyber secure processes.

This condition monitoring is comparable to a preventive medical check for human beings. Instead of a stethoscope, a sensor is used to feel and hear what a machine is doing. With the aid of sensors and microphones, continuous vibrations and noises can be measured to detect anomalies. This constant monitoring of critical components enables proactive measures to be taken where necessary. The result: Increased plant availability and cost savings in the long term.

All relevant information is displayed in a transparent way, helping to maximize productivity, efficiency, and availability. Even

shutdowns can be planned more efficiently. Maintenance work that is planned and performed accordingly increases the service life of plant components, thus reducing the overall investment. The objective is to keep the plant healthy and performing well.

SMALL, WIRELESS, AND ENERGY SELF-SUFFICIENT

Solution architecture: From the Metris Vibe sensor to the Metris UX Platform or the Metris Vibe App. The user can also, as an option, connect to the Metris Vibe Dashboard.

METRIS VIBE – THE ANDRITZ STETHOSCOPE

The new sensors that ANDRITZ has developed form the basis of effective and low-cost condition monitoring. Small, wireless, and energy self-sufficient with a service life of up to three years, the Metris Vibe sensors can be installed easily in large numbers at all the relevant points, providing a continual data stream on vibrations and temperature. The wireless capability enables this data to be captured at difficult-to-access machine parts.



With energy-saving Bluetooth technology, the data gathered is transferred to a gateway that sends the relevant information securely to the Metris server's condition monitoring app.

This data is then used to detect operational anomalies. The rotation frequency signals are analyzed with regard to their relative change in relation to each other and over time. The parameters are then evaluated and determined if they are in a normal or abnormal range. The user is able to recall the measuring results and status analyses using the condition monitoring app in the Metris UX Platform.

Data can also be shared with other ANDRITZ solutions and applications within the Metris UX Platform to improve plant performance even further.

Additionally, the Metris Vibe App was released at the end of 2019. The customer can connect his or her smartphone to the sensor, display the data measured, and export it to other applications. This makes it easy to keep an eye on the status of the machine at any time and react immediately in case there are any changes in the measurements.

THE VALUE OF PREDICTIVE MAINTENANCE

ANDRITZ has been offered a mill-wide risk-based maintenance forecast as part of process optimization contracts for some time. Integrating process and operating data, this forecast uses statistical methods to calculate the probability of a component malfunction – valuable information for maintenance planning.

In conjunction with the Metris Vibe sensors and the opportunities offered by machine learning, condition monitoring helps provide a holistic view of machine health. The integrative strategy of Metris products as part of ANDRITZ Digital Solutions enables seamless collaboration, helping to increase overall performance and achieve maximum plant availability.

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Patterns are detected and anomalies highlighted with an algorithm developed by ANDRITZ that uses the data measured; status analyses can be retrieved from the Metris UX Platform.

