

Remote Vibration Monitoring System (RVMS)

Rotary Machine Vibration Analysis



Remote Vibration Monitoring System (RVMS)

In many plants, the technical know-how of vibration monitoring is limited, leading to frequent failures and unplanned shutdowns. Specialised support and timely guidance can help prevent emergency shutdowns.

Forbes Marshall is proven supplier of vibration monitoring systems, with an installed base of over 100,000 monitoring sensors and 4000 customers across India.

We have a wide range of products and services for vibration monitoring including online systems for real-time analysis.



Need for 24X7 Vibration Monitoring for Machines

Vibration monitoring is a critical aspect to consider to plan predictive maintenance and run a plant safely and efficiently. Often, this gets overlooked and plants only schedule periodic maintenance.

Understanding machine health and planning actions in advance can increase plant uptime to 95%. Monitoring of critical machines is key to increasing efficiency and reliability and prevent frequent failures. 24x7 real time vibration monitoring also helps prevent frequent failures and breakdown of expensive machines thereby reducing the cost of maintenance.

VibAssist is an online machinery analysis system specially designed for rotating machinery like turbines, compressors, fans, blowers, motors and pumps. It collects and stores all data required, at preset intervals, to analyse the behaviour and health of machines. Data captured includes the time of occurrence of alarm, cause of abnormality, etc.

Benefits

Effective for old and new power plants from 1MW to 1000MW

Accurately monitors and analyses data

Provides better understanding of machinery dynamics like critical speeds and behaviour in transient conditions like start-up and shutdown, to help pinpoint abnormal conditions

Analysis and display functions i.e. machine trains, trend graph, spectrum, shaft center line position, bode/polar plot, orbit display, vector plot, alarm status, etc. to help avert possible failure by taking corrective action in advance.

Increases equipment availability and reliability and reduce costs

Web connectivity allows details to be viewed globally through Internet explorer on any computer or mobile phone

Compatible with all machinery for any type of vibration analysis

Provides advance information on machine condition to guide plant O&M teams avoid emergency shutdowns.

Features

High speed data acquisition during startup/ shutdown and steady state.

Browser based GUI with web connectivity.

Local viewing of GUI by directly connecting a monitor to the industrial analyser. It can be viewed from any location on LAN and/or web.

The client-server architecture allows simultaneously connecting the system and viewing independent data for any number of users without the requirement of any additional license.

GUI allows taking screen shots and all the data of trend and waveform can be stored in .csv format for any further analysis.

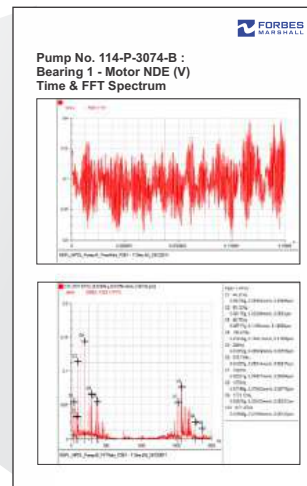
A wide range of analysis and display functions (machine trains, trend graph, spectrum, shaft center line position, bode/polar plot, orbit display, vector plot, alarm status, etc.)

Data for steady state and transient (startup and shutdown) state in a different manner. It considers the fact that the transient state requires more attention. In the transient state, waveform data gets stored quite frequently and the bode plot is displayed, which reveals the machinery characteristics in a better manner.

Real time display of various parameters.

Alarm module with indications of any abnormal condition and data saving at that instant for future analysis

Auto and manual backup of data which can be viewed later at any time.

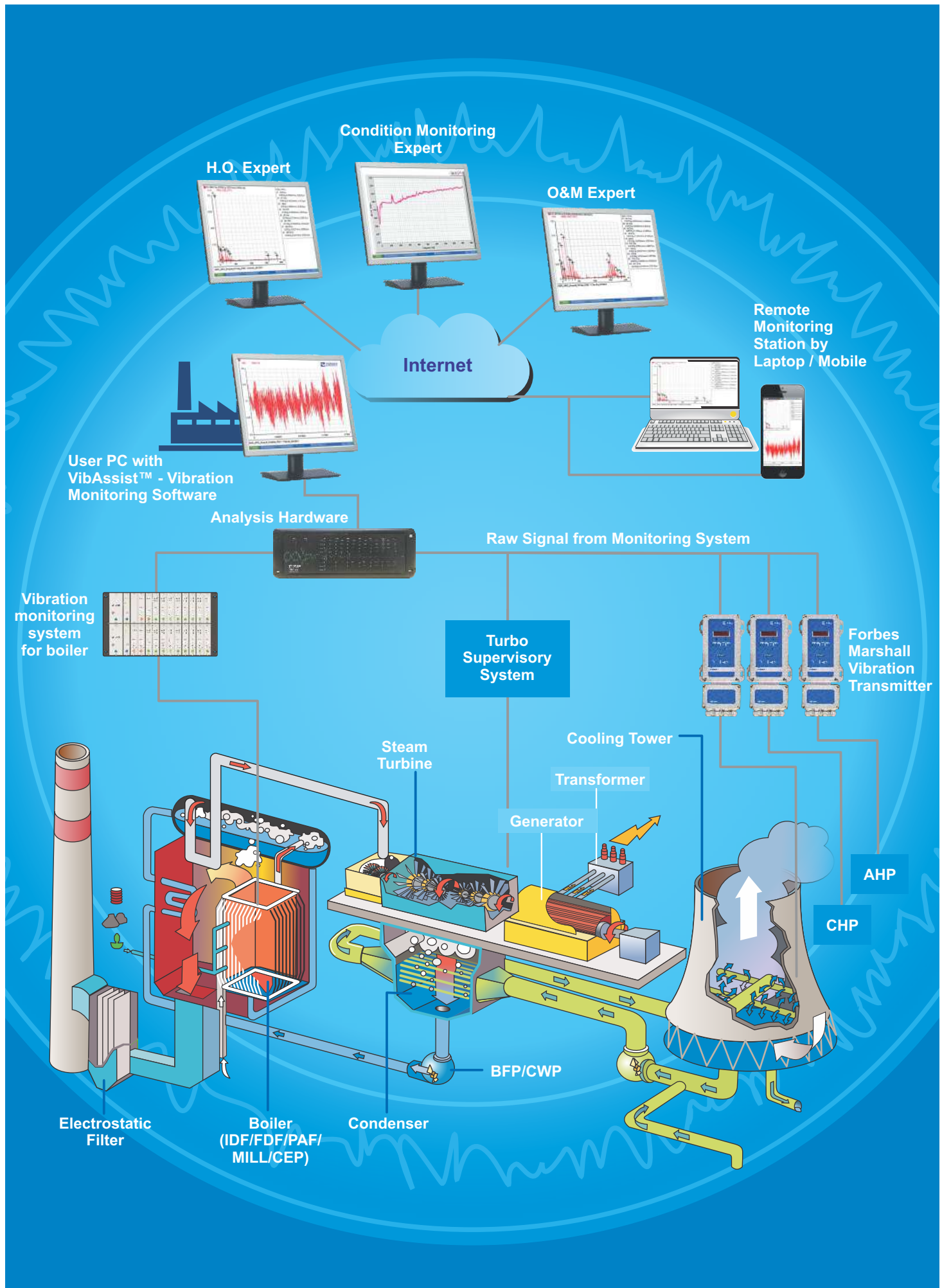


Report Management



Expert Analysis

Condition Monitoring and Assessment of Rotating Machinery



Project Management and Reports

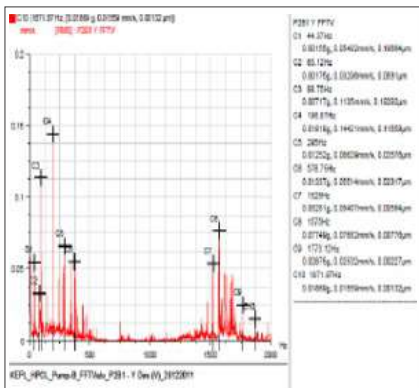
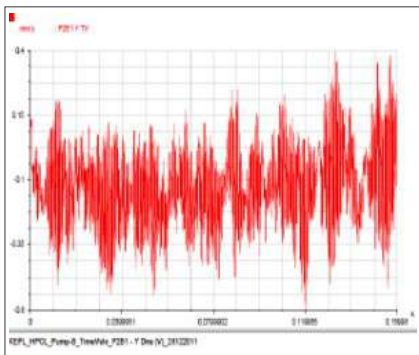
All monitoring, analysis, reporting and action calls are done by Vibration institute approved analysts – category –II.

Detail analysis reports with recommended action is submitted weekly/monthly/yearly, based on requirement.

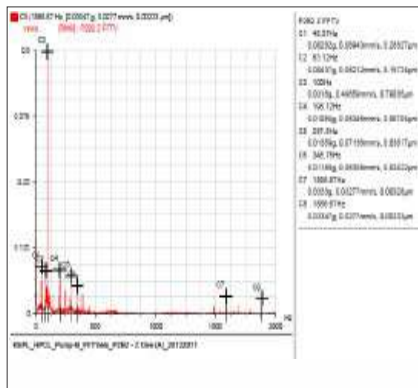
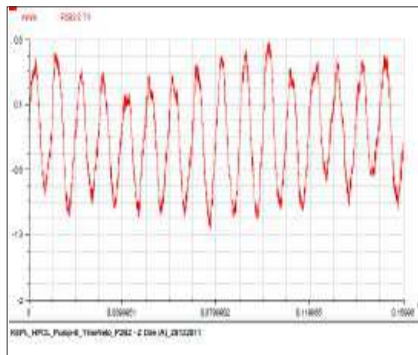


Sample Reports of Vibration Analysis

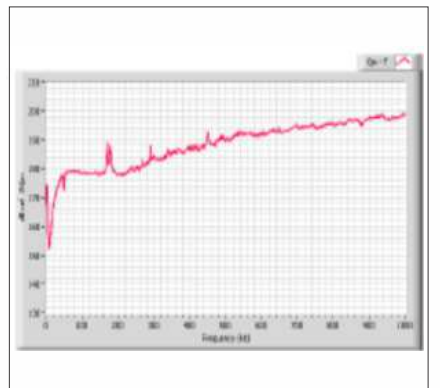
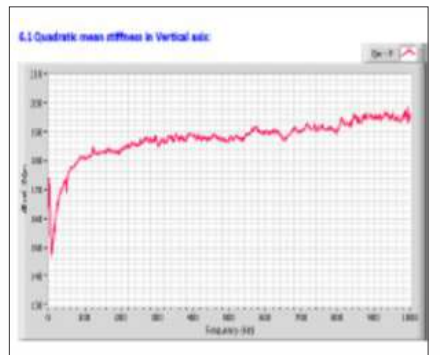
**Pump No. 114-P-3074-B :
Bearing 1 - Motor NDE (V)
Time & FFT Spectrum**



**Pump No. 114-P-3074-B :
Bearing 2 - Motor DE (A)
Time & FFT Spectrum**



Results
The following graph provide the quadratic mean of dynamic stiffness per direction



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