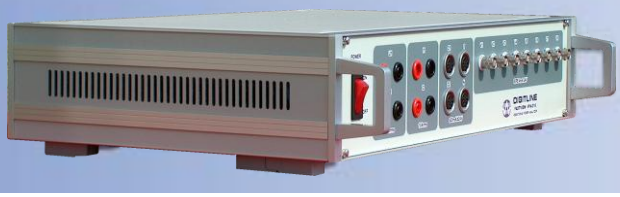
DAP104502

STEAM TURBINE DIAGNOSIS

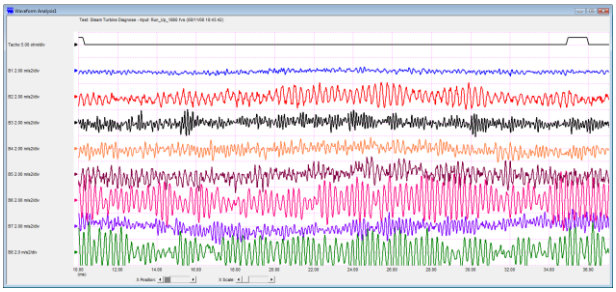


The VPA 316 analyzer is intended for the monitoring and advanced diagnosis of turbines through the complex analysis and monitoring of the main status parameters:

- Vibrations
- Thermal expansions
- Temperatures
- Speed
- Quality of electric parameters

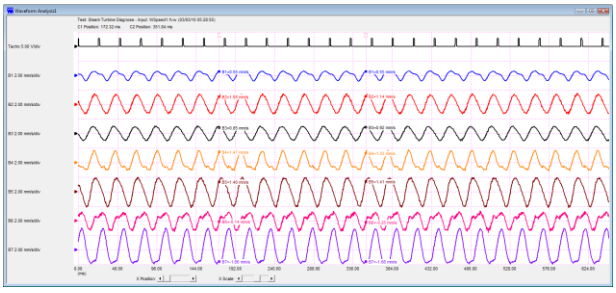
The 8 accelerometer inputs allow the simultaneous monitoring of all turbine bearings.

Being sensitive to high frequencies, accelerometer signals are used for the determination of shocks, friction, sealing and gearing and other flaws in the electric generator.



Vibration acceleration waveforms

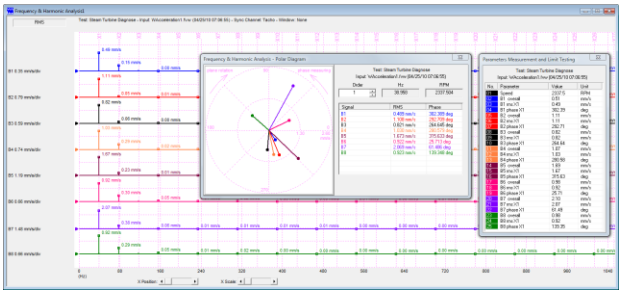
Through the integration of the accelerations in the time domain, we obtain the vibrations velocity waveforms. The vibrations speed parameters are used to monitor the turbine and find the faults caused by imbalances, misalignments, non-uniform expansions, eccentric air gap, or electrical imbalances.



Vibration velocity waveforms

The vibrations spectra synchronized with speed and the multi-channel polar diagram depict the status of each bearing and turbine overall.

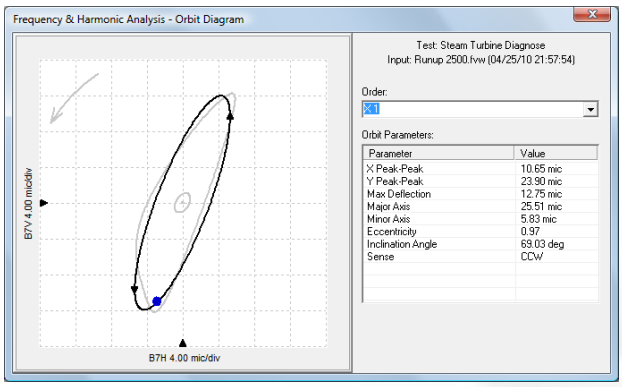
The *Parameters Measurement* window displays and monitors tens of user-selected parameters. The evolution of those parameters is recorded on a continuous basis in the *Parameters Trend* window.



Vibration spectrum, multi-channel polar diagram and list of tracked parameters

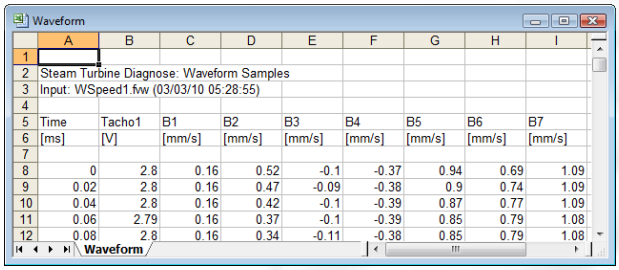
The analysis of the shaft or casing trajectory, we obtain useful information for the diagnosis of the entire shaft line.

The FFT orbit diagram decomposes the displacement into ellipses and calculates their geometrical parameters and the running direction.



Composed orbit, elementary orbits and selected orbit parameters

The final parameters and results of each analysis are being exported to an Excel file for presentation or specific processing purposes.



Waveform samples in an Excel table

The entire testing process may be recorded and played on a continuous basis with various processing options.

For the full list of capabilities, please see the *Fastview* analysis software.

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