

Use of AURA product in aviation technology

1) Measurement of vibrations and operating status of the air engine:

Monitoring of vibrations belongs to the traditional methods of inspection of the operation of air engines. The monitor for MLM air engines from the company AURA offers, in addition to the measurement of vibrations, an additional channel for ultrasound emission. The ultrasound emission enables to record any worsening of the operating status of the engine resulting from non-standard operating events, wearing of bearings or non-stationary phenomena in the turbine. Usually it cannot be recorded by common planned maintenance because of the origination, for example, during flying of a collision with a solid item or its suction into a jet engine or the fatigue of the material. Properties of MLM can also be used for connection to additional built-in units to modern air recorders.



2) Replacement of previously produced sets for vibration diagnostics of air engines – MLM 1.2 device:

On the basis of the requirements of our clients, special variants of the well-established MLM monitor were prepared for use as a direct replacement of the previously used sets for the measurement of vibrations. Therefore, there is the option to replace conceptually outdated or sets which cannot be produced using new and modern technology. The advantage of the offered variants is always the 100% changeability with the original set not only in terms of the electric system, but also the connecting connectors and installation holes.

Examples of changeability of the original sets:

<u>Set:</u>	<u>Type of engine:</u>
IV 300L	AI-25 TL
IV-L39	DV-2
IV- 500E	TV 3



3) Monitoring of the status of the bearings and the reactor in helicopters:

The variant of MLM used for helicopters enables to measure vibrations of the engine to complete the engine with the measurement of vibrations and the monitoring of ultrasound emissions from the bearings and the reactor of helicopters. The long-term experience of AURA from applications in the area of rotating machines provides for helicopters the unique option to prevent, e.g. blocking of bearings or damage to a reactor, e.g. by incorrect or insufficient lubrication.



4) Balancing of the load-bearing areas of helicopters

A special variant of MLM is used for the monitoring of very low frequencies caused by the rotation of the rotor necessary for the system of dynamic balancing of rotating load-bearing areas of helicopters.

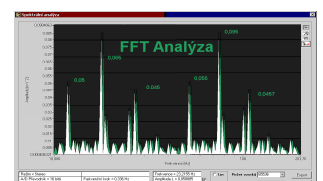
5) Manual set for the measurement of vibrations and the status of bearings – MV-4 and MV-4L

For ground motor tests, control and service demands, AURA offer manual MV4L measuring devices. Their typical feature is the wide ranging option of setting measured parameters to use special SW and the processing of values. The device also offers monitoring of the status of the application of ultrasound emissions.



6) Portable measuring set for the measurement of the spectrum of vibrations – C8-USB

The analysis of the full spectrum of engine vibrations is used in the testing of engines and during the diagnosis of defects. For the purpose of spectrum analysis, AURA offers a C8-USB set with SW application enabling connection with a portable PC to record the measured signal and its spectral analysis with the use of FFT



The leader on the market of vibration diagnostics



The company AURA a. s. is leading global producer of products in the area of technical diagnostics. Some of our main products are: sensors for vibrations, the status of bearings, rotation, converters and monitors for the monitoring of operating machines.

The standard includes the delivery of complete diagnostic systems ensured from the design up to the final implementation. The offer of AURA a.s includes control systems for the area of industrial technologies, as well as information systems aimed at the collection, visualization and archiving of data from production, as well as testing operating units.

Key areas for the delivery of products by AURA a.s:

- Petroleum industry
- Mines and mining industry
- Metallurgy and heavy industry
- Deliveries for the chemical industry
- Roads and railway tunnels
- Air technology
- Water and air power plants
- Vibration transport
- Manual measuring devices

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