Assessment of changes in the rolling bearing technical state as a result of wear

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The article considers problems of vibration diagnostics of bearing assembly wear using the traditional transverse vibration sensors, as well as the angular displacement sensor, i.e., by the torsional component of vibrations. It is shown that the bearing frequencies in the vibration signal spectra obtained from the angular displacement sensor, as well as the changes in the amplitude-frequency composition of the defective bearing vibration signal associated with wear are clearly seen. It is proposed to use angular displacement sensors, along with other methods of defect diagnostics in bearing assemblies, which simplifies the analysis of the vibration signal. The problem was solved on the basis of experimental data obtained at the stand in the laboratory of the Department of Principles of Machine Design, Bauman Moscow State Technical University.

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