

Analysis of Modern Methods of Acoustic Signal Processing For Use in Problems Vibroacoustic Diagnostics

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In order to test the modern methods of the acoustic signal processing (namely, the method of multiple signal classification, the Prony's method, the frequency-time analysis, and the wavelet-transformation), a processing of the acoustic signal, being an impulsive response of a turbine without fault to the shock excitation of one of the rotor blades, is carried out. The effectiveness of the mentioned methods and expediency of their use for vibroacoustical diagnostics of arising fatigue faults in the rotor blades of aircraft motors is shown.