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**LABVIEW APPLICATION PACKAGE FOR MODELING AND EFFICIENCY ANALYSIS OF VIBRATION SIGNAL PROCESSING AVIATION ENGINE**

The model-virtual instrument system vibration signal processing aircraft engine that was developed using the graphical programming environment NI LabVIEW. The model has two levels of functioning. The first level is designed to detect invalid values vibrations of structural elements of aircraft engine. Applied following filter to monitor vibration levels in all modes of operation. The second level performs diagnostic functions and detects defects on the stage of their appearance. It uses wavelet decomposition of the measured vibration signal. The decomposition using Daubechies wavelet family db10 with decomposition at 5 levels. Further development of the system will increase the range of defects that are diagnosed at an early stage of their appearance.

**Keywords:** aircraft engines, vibration signals processing system, a virtual instrument, LabVIEW.