

Identification of External Disturbances in Rotating Machinery with Magnetic Bearings

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ABSTRACT

In the paper we consider the identification method of external disturbances: unbalance and sensor run-out, acting on the rigid rotor supported in two radial magnetic bearings. The disturbances are identified together with the identification of the open-loop system parameters. The disturbances are separated so result of identification can be used to improve the measurement system or/and in the system of automatic balancing. Results of computer simulation of considered method are presented.

Keywords: magnetic bearing, identification, unbalance, sensor run-out