

ABSTRACT

Provided are a magnetic bearing device and a vacuum pump that are capable of recovering from an abnormal state such as oscillation safely, with high operating efficiency, in a levitation system using a magnetic bearing and that have high reliability with low false
5 detection of abnormalities.

The magnetic bearing device includes a magnetic bearing that magnetically supports the rotating body in a floating manner in air, and a magnetic bearing controller that controls the magnetic bearing, the magnetic bearing device further including: a first
10 abnormality detection means for detecting an abnormality of control by the magnetic bearing controller on a basis of a predetermined first abnormality condition, a control parameter correction means for correcting a control parameter of the magnetic bearing controller while continuing an operation of the magnetic bearing device when the first abnormality detection means detects the abnormality of the control, a second abnormality detection means for
15 detecting the abnormality of the control by the magnetic bearing controller on a basis of a predetermined second abnormality condition having a larger degree of abnormality than the first abnormality condition, and a stopping means for stopping the operation of the magnetic bearing device when the second abnormality detection means detects the abnormality of the control.

20 Figure 2