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ABSTRACT

Self-Monitoring and Self-Healing of Frequency Specific Position Errors in a Data Storage Device

A narrowband filter may be used to reject, from an actuator control signal generated by a data storage device controller (30), a disturbance frequency associated with a spindle bearing defect in a data storage device. The narrowband filter is disposed in proximity to a zero crossover frequency associated with the data storage device controller. Further, a peak filter disposed in a control loop of a data storage device controller (30) may be configured to detect a spindle bearing defect in a data storage device by detecting an amplitude of a control signal in the control loop in proximity to a disturbance frequency associated with the spindle bearing defect.

Fig. 1.