

METHOD AND APPARATUS FOR DETECTING DEGRADATION IN DATA STORAGE SYSTEM SPINDLE MOTOR PERFORMANCE

ABSTRACT

A method and apparatus for detecting degradation in data storage system spindle motor performance are disclosed. A duration of time (t) required for the spindle motor (26) to transition between an initial velocity (w_I) and a test velocity (w_T) is determined at or near the time of data storage system manufacture and periodically during the service life of the spindle motor (26). Deviations between the manufacturing and in-service time durations (t_B , t_s) are computed and, depending on the magnitude of the deviation, invoke particular data storage system responses. The in-service time duration procedure is preferable performed when spindle motor power is removed, typically during a power-down or power-saving sequence.

Fig. 5.