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ABNORMAL MAGNETORESISTIVE ELEMENT DETECTION FOR A DISC DRIVE



Abstract of the Disclosure

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A magnetoresistive element measurement circuit configured for measuring resistance of a magnetoresistive element biased by a current source is disclosed. In a preferred embodiment, the measurement circuit includes the magnetoresistive element, a current source providing a fixed current to the magnetoresistive
10 element, at least one current bypass switch controllingly engaging a measurement resistor in an electrical parallel configuration with the biased magnetoresistive element, and an analogue voltage detector measuring voltage first across the biased magnetoresistive element and then across the biased magnetoresistive element in electrical parallel communication with the measurement resistor. The measured
15 voltages are factored with the measurement resistor to determine the resistance of the magnetoresistive element. The determined resistance is compared to a resistance range, if within the range the magnetoresistive element is in an operative state, if outside the range the magnetoresistive element is in a non-operative state.

FIG. 4