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THERMALLY-ASSISTED MAGNETIC RECORDING SYSTEM WITH HEAD HAVING RESISTIVE HEATER IN WRITE GAP

ABSTRACT OF THE DISCLOSURE

A thermally-assisted magnetic recording disk drive is provided that records data by heating a small region of the magnetic layer on the disk to near or above its Curie temperature while a write field is applied by a thin film inductive write head. The thin film inductive write head includes an electrically resistive heater (20) located in the write gap (WG) between the pole tips (P1, P2) of the write head. The resistive heater (20) is sandwiched between first and second spacer layers (I1, I2) that are located between the pole tips (P1, P2) of the write head. since only the region of the magnetic layer on the disk that is heated by the resistive heater (20) can be written by the pole tips (P1, P2) of the write head (P1/S2), the data track width on the disk is defined by the width of the resistive heater (20), not by the geometry of write head pole tips (P1, P2).

FIG. 2A

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