

ABSTRACT

THIN FILM INDUCTIVE READ WRITE HEADS HAVING NARROW WRITE TRACK WIDTH AND METHODS FOR THEIR PRODUCTION AND USE

A thin film inductive read write head is provided which has a very narrow write track width for
5 increasing the areal density of a magnetic disk drive. A high throughput method for producing the
narrow track width inductive head is also provided, whereby the heads may be manufactured in
substantial volumes. The new head may be merged or piggy-backed MR or GMR heads,
comprising a first pole piece, P1, and a second pole piece, P2, and is distinctly characterized by
write track width is significantly reduced by a preliminary ion milling process before P1 notching
10 is performed. The preliminary step utilizes an ion milling process to trim the write track width,
P2B, at an angle between 45 to 85 degrees from the wafer normal. The MR head may then
undergo conventional P1 notching. The new merged or piggy-backed MR and GMR heads,
fabricated with the inclusion of the inventive preliminary step, has a P2B much smaller than
previously attainable, and may be readily fabricated in high throughput manufacturing systems.

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