

UNITARY MAGNETIC TRANSDUCER AND SUSPENSION STRUCTURE
FOR LONGITUDINAL OPERATION

ABSTRACT

A unitary magnetic transducer and suspension structure for
5 longitudinal recording which can be used for contact recording and flying
above the media. The transducer includes a horizontal first pole piece
and a horizontal and vertical sectioned second pole piece. The magnetic
gap is formed between the first pole piece and the vertical section of
the second pole piece. The suspension layers are formed mainly from the
10 insulation layer that separate the first horizontal pole piece and the
horizontal section of the second pole piece, and an insulation layer that
covers and protects the transducer layers. The layers of the unitary
structure head are deposited on a wafer in a row and column
configuration. A release layer is deposited on the substrate first and
15 then the individual thin film layers of the transducer are deposited. A
horizontal first pole piece is formed. A horizontal section of a second
pole piece is formed and activated by a conductor coil wound around the
horizontal section. The backgap is displaced horizontally from the
poletips. The wafer is then divided into rows. The vertical section of
20 the second pole piece is formed on the end of the row in contact with its
horizontal section. The substrate is removed by attacking the release
layers.

