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(71) Applicant: INTERNATIONAL BUSINESS MACHINES CORPORATION [US/US]; New Orchard Road, Armonk, NY 10504 (US).

(71) Applicant *(for MC only)*: IBM UNITED KINGDOM LIMITED [GB/GB]; P.O. Box 41, North Harbour, Portsmouth, Hampshire PO6 3AU (GB).

(72) Inventors: SANTINI, Hugo, Alberto, Emilio; 339 Bodega Way, San Jose, CA 95119 (US). WILLIAMS, Mason, III; 5826 Vargas Court, San Jose, CA 95120 (US).

(74) Agent: LITHERLAND, David, Peter; IBM United Kingdom Limited, Intellectual Property Law, Hursley Park, Winchester, Hampshire SO21 2JN (GB).

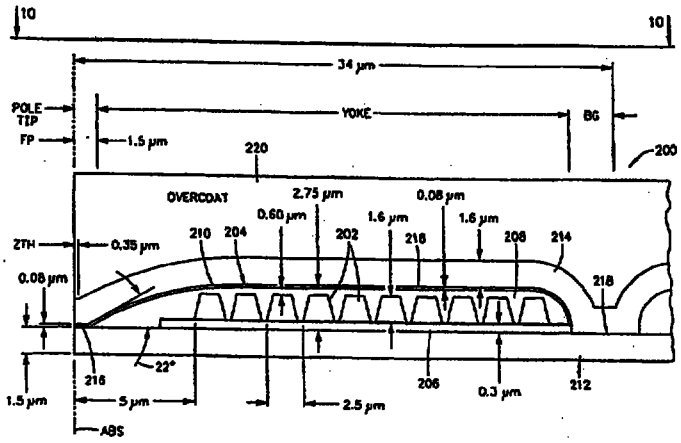
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(54) Title: MAGNETIC WRITE HEAD



(57) Abstract

A magnetic write head (200) has most of its significant dimensions scaled down proportionally to achieve a higher recording density and a higher data rate. A significant dimension not scaled down proportionally is the thickness of the write coil layer so as to prevent heating of the head. The thickness of the write coil layer is equal to or greater than the thickness of the second pole piece layer (214). The insulation stack of the write head employs a nonorganic first insulation layer (206) and only one baked photoresist layer which is a second insulation layer (208). A third insulation layer (210) of the insulation stack may be provided by an extension of the write gap layer (216). With a lower stack height and with first and second pole pieces that are thinner, a well-defined second pole tip is constructed without reflective notching. The write gap layer is constructed after the other insulation layers of the insulation stack so as to prevent a reduction of its thickness during construction of the write coil layer. The data rate is increased by decreasing the thicknesses of the first and second pole piece layers which reduced thicknesses are enabled by decreasing the pitch of the write coil layer and moving the write coil layer closer to the ABS.