

LAMINATED MAGNETIC STRUCTURE FOR USE IN A MAGNETIC HEAD

ABSTRACT

A layered magnetic structure for use in a magnetic recording and/or readback head comprises at least first and second layers of silicon-aluminium-iron (SiAlFe), known as sendust. In one embodiment the multilayered magnetic structure includes a seed layer of a first sendust alloy and a bulk layer of a second sendust alloy overlying the seed layer, providing greatly improved anisotropic field and soft magnetic characteristics for the structure over a relatively wide range of compositions for the sendust material used for the bulk layer. The seed layer can be a single sendust layer or, alternatively, can be a multilayered structure including layers of a gas-doped sendust material and layers of non-doped sendust material formed in an alternating sequence. The dopant gas is a gas such as nitrogen, oxygen or air, for example. Because of the hardness exhibited by sendust films, the described multilayered sendust films are excellent candidates for magnetic shields and inductive pole tips exposed at the air bearing surface of a transducer in a magnetic storage device.

