

Abstract

Method for Manufacturing Master Disk for Magnetic Transfer

A patterned groove is formed on the main surface of a silicon substrate 11, which is the substrate of a magnetic transfer master disk, and a conductive thin film 14 is formed on the main surface of the silicon substrate 11 and the groove surfaces. With this conductive thin film 14 as one electrode, a plating film 15 of a soft magnetic material is deposited on the main surface of the silicon substrate 11 and inside the grooves by electroplating. Since the conductive thin film 14 is formed not only on the bottom of the grooves formed in the silicon substrate 11, but also on the side walls, voltage is reliably applied to the entire surface of the grooves in the electroplating step, and the soft magnetic material is reliably embedded in the interior of the grooves. Finally, just the soft magnetic material deposited on the main surface of the silicon substrate 11 is removed by CMP, causing the soft magnetic material in the interior of the grooves to remain.

Selected Drawing: Fig. 1