PROCESS FOR BONDING COMPOSITION TO A THIN FILM STORAGE MEDIA

ABSTRACT

A method for bonding a lubricant onto the surface of rotating storage media is described. In particular, the method bonds reactive and non-reactive lubricants onto the carbon based protective coating of a magnetic storage disk. The lubricant is first applied onto the disk surface through conventional coating techniques, such as dipping, spinning, spraying, or vapor deposition. The thickness of the applied coating is thicker than the final bonded thickness of the lubricant. Typically, the applied thickness of the film is approximately 3.0×10^{-11} metres (30 Angstroms). The lubricant coated disk surface is then exposed to low energy electron irradiation. The energy level of the accelerated electrons is below 100 eV. The lubricated film is exposed to a dosage level of approximately 1000 microcoulombs per square centimetre. This dosage level bonds approximately 1.5×10^{-12} metres (150 Angstroms) of lubricant to the disk surface. The non-bonded or excess lubricant may then be rinsed off in a liquid freon or other suitable rinse.

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