

Thesis Title	Effects of BLKL Process Parameters on Slider Bar Behavior
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#### Abstract

BLKL process is a lapping process to control the CCT (Crown, Camber, and Twist) of each air bearing surface. Two slider bars, after adjusting resistance of the magnetic head and making the relief cut, were glued on the poron pad of the lapping puck by gel-pak adhesive to polish on the lapping plate, a concave part of spherical shape. The objective of this research aims to study the effects of three parameters, the shape of lapping plate, the shape of lapping puck, and the relief cut depth, to the behaviors of slider bars in the BLKL process using the finite element method. The solid parabolic brick elements were used in the models and constrained between slider bars and lapping plate using contact analysis. The results showed that there was no effect to the CCT from the shape of lapping puck, but the smaller radius of curvature of lapping plate could generate much higher Crown and Camber of the air bearing surfaces after the process. Furthermore, the decreasing of relief cut depth at both ends of each slider bar could improve Crown and Camber of both areas.

This research shows the versatility of the finite element method which can be applied to various and complicated problems. This method permits analytical study of the effects of changing various parameters instead of performing any experiments which can reduce cost and time in the process.

Keywords : Slider Bar / Crown / Camber / Twist / Finite Element Method