

This study examines the modal parameters for a flat plate for four cases: freely suspended, plate freely suspended while supported by an oil film, plate fixed at several locations, and plate fixed at several locations while supported by an oil film. The investigation is motivated by the need to understand the bending properties of a square plate on a slip table, particularly with consideration of the damping provided by an oil film. A comparison of support and damping characteristics supplied by an oil film with that provided by equally placed linear bearings will be made. Analytical and empirical data is contrasted and discrepancies discussed.