This thesis presents the behavior study of long rectangular plate on infinitely elastic subjected to line loading at midspan of width of the plate. The optimum analysis of plate thickness function for increasing the intensity of load is also presented.

The behavior analysis of long rectangular plate with constant thickness and the optimum thickness analysis for the plate is determined by using the variation of calculus method and the principle of minimum potential energy under the conditions that the cross-sectional area and the deflection at applied loading point are the same as those plates with constant thickness.

The comparison of the intensity of load with the constant function had been made by using between 3 thickness functions : cosine function, linear function and quadratic function. It was found that the assumed linear function which resulted in the maximum thickness at the applied loading point is the most suitable.

ภาควิชา................วิศวกรรมโยธา......................... ลายมือชื่อนิสิต........................อภา..ตั้งชัย..............
สาขาวิชา...............วิศวกรรมโครงสร้าง...................... ลายมือชื่ออาจารย์ที่ปรึกษา...
ปีการศึกษา...2539.. ลายมือชื่ออาจารย์ที่ปรึกษาร่วม...-..........