

Approximate techniques towards solutions of Reissner plates

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Abstract

In this thesis, Reissner's equations of the plate problem were solved by two approximate methods, namely: (1) the higher order plate theory, and (2) the reduced fourth order theory (both introduced by Baluch and Voyadjis). Navier's and Levy's methods were used when solving for the deflection function. A number of problems of rectangular plates with various boundary conditions were solved and their results compared with existing solutions obtained from the finite difference approach or the closed form solutions whenever possible.