Stability analysis of orthotropic plates by a mixed complementary energy method

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Abstract

In this thesis, elastic buckling loads for thin rectangular orthotropic plates are deermined using a recently introduced technique [5] which utilizes the principle of a mixed complementary energy approach. Buckling loads are found for various edge and loading conditions of plate. The edge conditions may vary from simply supported all around to clamped plates, with the loading being of uniaxial, biaxial or of shear type. Results using of uniaxial, biaxial or of shear type. Results using the potential energy method which yield comparison. Convergence of the solution is discussed for different edge and loading conditions of rectangular orthotropic plates.