Behavior of Laminated Plates under Mechanical Loading

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Abstract : In this study the use of two variable refined plate theories of laminated composite plates to static response of laminated plates. The plate theory accounts for parabolic distribution of the transverse shear strains, and satisfies the zero traction boundary conditions on the surfaces of the plate without using shear correction factor. The validity of the present theory is demonstrated by comparison with solutions available in the literature and finite element method. The result is presented for the static response of simply supported rectangular plates under uniform sinusoidal mechanical loadings.