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Research Details :

Research Title	: *Three-dimensional elasticity solution for uniformly loaded cross-ply laminates and sandwich plates*
	Three-dimensional elasticity solution for uniformly loaded cross-ply laminates and sandwich plates
Descriptipn	: This article establishes the bending problem of cross-ply laminated plates using the three-dimensional elasticity equations as well as the technique based on the state space concept. It presents a wide variety of results for the symmetric and antisymmetric analyses of rectangular multilayer plates subjected to a sinusoidally/uniformly distributed load (SDL/UDL). In addition, this study provides a strong mathematical tool allowing one to determine, in an exact and unified manner, the state of stress and displacement of cross-ply laminated composites and sandwich plates. The well-known results (given in Pagano ((1970), Exact Solutions for Rectangular Bidirectional Composites and Sandwich Plates, Journal of Composite Materials, 4(I): 20-24.) and Pagano and Hatfield ((1972), Elastic Behaviour of Multilayered Bidirectional Composites, AIAA Journal, 10(12): 931-933.) due to the exact three-dimensional elasticity solution are in fact special cases of the present technique.
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