عنوان مقاله:

Mixed Elastic Variational Formulation of Composite Plates Based on Dimension Reduction Method

محل انتشار:

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خلاصه مقاله:

In the present research, a new modeling approach for elastic composite plates is studied. By adopting mixedvariational formulation and dimension reduction method along the thickness, a general plate model is derived. Firstly,shape functions weighted with arbitrary coefficients adopted along the thickness of plate for both displacement andstress field and then, partial differential equation system of plate is derived by using the Hellinger-Reissner principle.Moreover, a comparison between current work and other theories such as Classical and First Order ShearDeformation Theory has been done, and advantages of this method are discussed Needless of shear correction .factor,more accurate results and independent stress from displacement filed are some advantages of this approach

کلمات کلیدی:

Composite plates, mixed variational formulation, dimension reduction method, elastic analysis