عنوان مقاله:

Three dimensional static analysis of functionally graded curved panel resting on two-parameter elastic foundation using a hybrid semi-analytic, differential quadrature method

محل انتشار:

همایش ملی آشنایی با فناوریهای روز در زمینه مهندسی مکانیک (سال: 1389)

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خلاصه مقاله:

Based on the three-dimensional elasticity theory, static analysis of functionally graded (FG) curved thick panels resting on elastic foundation, under simply supported boundary condition is studied. Response of the elastic foundation is represented by Winkler /Pasternak model. The FG material properties are formulated based on the power law distribution in terms of the volume fractions of the constituents through the thickness of the curved panel. Differential quadrature method in conjunction with the trigonometric functions is used to discretize the governing equations. The convergence of the method is demonstrated. In order to validate the results, comparisons are made with the results obtained from ANSYS software. Good solution agreements exist between the results obtained from present method and those obtained using ANSYS software.

کلمات کلیدی:

Static analysis; Curved panels; FGM;DQM;