

## عنوان مقاله:

Thermal Buckling Analysis of Truncated Porous Conical Shells

## محل انتشار:

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## خلاصه مقاله:

This paper presents thermal buckling analysis of functionally graded porous truncated conical shell. It is considered that a fluid undrained between porous material. The porous material properties vary continuously across the thickness direction of the shell based on a specific function. Also it is assumed that the shell is simply supported at its both ends. The governing equations are obtained based on the Sanders nonlinear strains relations and the classical shell theory using of variational formulations. The case of uniform temperature distribution through the shell domain is considered. The general mechanical nonlinear equilibrium and linear stability equations are derived. By using minimum potential energy criterion, the stability equations are established and the single-mode Galerkin method is used to obtain the critical buckling temperature difference and finally, the results of critical buckling temperature difference, variation in thickness, porosity and angle of conical shell are investigated. The results are compared with the known data in the literatures.

## کلمات کلیدی:

Porous material, Thermal buckling analysis, Conical shell, Galerkin method

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/817411>

