

عنوان مقاله:

Buckling Behaviors of Variable Stiffness Composite Cylindrical Shell with Elliptical and Circular Cross Sections under External Hydrostatic Pressure

محل انتشار:

پنجمین کنفرانس بین المللی کامپوزیت (سال: 1395)

تعداد صفحات اصل مقاله: 2

نویسندگان:

Hossein nopour - *Ph.D. student, Department of Science and Marine Engineering, Malek Ashtar University of Technology*

Abdulreza Kabiri Ataabadi - *Asiatant Professor, Department of Science and Marine Engineering, Malek Ashtar University of Technology*

Mahmood M. Shokrieh - *Professor Composites Research Laboratory, Center of Excellence in Experimental Solid Mechanics and Dynamics, School of Mechanical Engineering, Iran University of Science and Technology, Tehran, ۱۶۸۴۶-۱۳۱۱۴, Iran*

خلاصه مقاله:

In this research, optimum buckling pressure of variable and constant stiffness composite cylindrical shells with elliptical and circular cross sections was obtained. Although, bending moment and axial loads for composite cylindrical shell with circular cross section and axial load for composite cylindrical shell with elliptical cross section have been often considered, however the external hydrostatic pressure has been rarely investigated. In the present study, axial variation of fiber orientation for both cylindrical shell with elliptical and circular cross sections and circumferential variation of fiber orientation for cylindrical shell with elliptical cross section were considered. For the optimization process, the generic algorithm program and Abaqus finite element software were used. Results show enhancement of buckling pressure for the variable stiffness composite cylindrical shell with respect to that of the constant stiffness composite cylindrical shell. Circumferential variation of fiber orientation for cylindrical shell with elliptical cross section does not increase buckling pressure

کلمات کلیدی:

Cylindrical shell, external hydrostatic pressure, variable stiffness, circular cross section, elliptical cross section

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/778975>

