

عنوان مقاله:

Investigating the Influence of T-shaped Stringer Stiffeners on Structural Behavior in Cylindrical Steel Shells

محل انتشار:

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خلاصه مقاله:

Shell structures are usually formed from concrete, steel and many other materials. Steel is typically used in the structures of chimneys, liquid storage tanks, pressure vessels, silos, pipelines and etc. Unlike concrete shells, steel shells are regularly stiffened with the help of stringer and/or ring stiffeners. Experiences of damage to thin walled shells during an earthquake revealed that their major failure mode is buckling. Most of the code provisions consider quasi-static relations for estimating buckling capacity of cylindrical shells. This paper concentrates on buckling of T-shaped stringer stiffened cylindrical shells under axial compression. To this end, some finite element models of cylindrical shells with different diameter to thickness ratios were prepared. The results revealed that global buckling of stringer stiffened cylindrical shells are related to location and geometry of stringer stiffeners.

کلمات کلیدی:

Shell structures, T-shaped stringer stiffener, Stiffened cylindrical shell, Global buckling

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