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## عنوان مقاله:

Equivalent Earthquake Loads for Some Families of Barrel Vaults Parabolic Shapes

**محل انتشار:** نهمین کنگره بین الملی مهندسی عمران (سال: 1391)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

Double layer barrel vaults parabolic shape, are a group of "Lattice space structures" that are one of the most common choices for covering large areas. These structures are also used as temporary shelters after strong and destructive earthquakes. Unfortunately, the available research results on the seismic behaviour of these structures are rather scarce and there is no universally accepted code of practice for assessing the earthquake loading for these structures. In the peresent work, the dynamic characteristics of the double layer barrel vaults parabolic shape are studied and the analysis of eigen values for determining periods of structures, mode shapes, mass participation factor, damping characteristics of structures have been used. Then with applying different accelerograms and time history analysis the effects of horizontal and vertical components of earthquakes on these structures investigated. And some formulae are suggested for assessing the horizontal and vertical effects of earthquakes. The nonlinear analysis of structures is used and with investigated of ductility of the structures the behaviour factor of structures is determined .To investigated nonlinear behaviour of barrel vaults parabolic shape a recently developed method, namely pushover analysis method, employed for the barrel vaults parabolic shape. The results of this analysis show that barrel vaults .parabolic shape are brittle structures and may involve progressive collapse after buckling of some elements

## کلمات کلیدی:

Double layer barrel vaults parabolic shape, Dynamic characteristics, Nonlinear analysis, Behavior factor, Pushover analysis method

## لینک ثابت مقاله در پایگاه سیویلیکا:



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