

عنوان مقاله:

Investigation the effect of nonlinear viscous dampers on dynamic response rebate of cablestayed bridges under near and far-field earthquakes

محل انتشار:

دومین کنفرانس بین المللی عمران ، معماری و مدیریت توسعه شهری در ایران (سال: 1398)

تعداد صفحات اصل مقاله: 14

نویسندگان:

A Amidfar - Department of Civil Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran

F Emami - Department of Civil Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran

M.R Mansouri - Department of Civil Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran

خلاصه مقاله:

Nowadays, considering to the effective role of passive control systems in reducing seismic demand and improving the performance of structures, the most important approaches to improving structures are increasing energy absorption and reducing seismic demand using methods such as seismic isolation, reduction of structural mass and systems energy dissipation. Considering the types of bridges damaged in past earthquakes, which in most cases were due to the elastic bridge design philosophy, in this paper, along with the study of the effect of viscous damper on seismic correction of cable bridges under near-earthquake earthquakes, the effect of nonlinear modeling the cables and the viscous damper on the Świętokrzyski cable-stayed bridge in Poland were modeled in the CSI Bridge-V20.2, bridge-specialized software. The results indicate a 50 to 60 percent reduction in the dynamic response of the bridge using a nonlinear viscoelastic damper. Also, due to different results of the damper in different locations of the bridge, the distance between the deck and the bridge bases is a suitable and optimal location for reducing the seismic response and increasing the performance level of the cable bridge.

کلمات کلیدی:

Cable-stayed bridge, Viscous damper, Nonlinear dynamics analysis, Seismic response

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/973251>

