عنوان مقاله:

Retrofit optimization for resilience enhancement of office buildings in the refinery sites under seismic scenarios

محل انتشار:

دوازدهمین کنگره ملی مهندسی عمران (سال: 1399)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Pedram Omidian - *PhD Candidate of Earthquake Engineering, Faculty of Civil and Environmental Engineering, Tarbiat Modares University, Tehran, Iran*

Naser Khaji - *Professor of Infrastructure Management, Graduate School of Advanced Science and Engineering, Hiroshima University, Japan*

خلاصه مقاله:

Structure retrofitting is a common approach to increase the resilience index. In the event of an earthquake, it is essential to protect the lives of employees in buildings in refinery sites to prevent casualties and to prevent financial losses. A multi-objective framework will be used in this paper to selectthe retrofit pattern that is optimized for resilience index and retrofit cost. A common type of such buildings is considered for which two seismic intensities, different retrofit plans, thicknesses and jacketing materials are selected. The optimal set of solutions is calculated through Nondominated SortingGenetic Algorithm II. The results show that choosing the optimal pattern can minimize its cost in addition to achieving a certain resilience level.

کلمات کلیدی:

Multiobjective optimization, Genetic Algorithm, Resilience, Seismic retrofit

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1120563