سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها گواهی ثبت مقاله در سیویلیکا CIVILICA.com

عنوان مقاله:

(Evaluating the Behavior Factor in Irregular Steel Buildings in Height (Massive Type

محل انتشار: دومین کنفرانس بین المللی پژوهش در علوم و مهندسی (سال: 1395)

تعداد صفحات اصل مقاله: 13

نویسندگان: Nima Mohammadi - *MS candidate in structural engineering, Chaloos Islamic Azad University*

Saleh Amin Yavari - Faculty member of civil group, Chaloos Islamic Azad University

خلاصه مقاله:

Ihis study examined the seismic behavior of steel buildings and the impact of height irregularity. In order to assess the impact of height irregularity on seismic behavior of steel buildings, the numerical models of four irregular steel buildings in height and also of two regular buildings were simulated by Sap 2000 software. Analysis of structures was performed using non-linear static pushover method. Moreover, how plastic hinges were formed in each of the cases were evaluated on the basis of the instructions for seismic rehabilitation of existing buildings (Publication No. 360). Then parameters of determining behavior factor of structures including overall ductility factor of structure, resistance reduction factor of ductility and additional resistance factor were extracted using load-displacement graphs obtained from pushover analysis. And finally, the behavior factor of each simulated structure was determined by Miranda and Bertero and was compared with the behavior factor proposed by Iranian seismic standard (2800). In this study, comparing the obtained behavior factors in the examined irregular structures with the introduced behavior factors in the seismic standard (2800) shows a significant difference between the mentioned cases so that even this difference is about 37/48 percent. Although the editors of Iranian seismic standard (2800) have proposed R for special structuralsystem based on significant and influential parameters and then with some restrictions, they have considered other destructive factors such as irregularity; but due to this considerable difference and due to various irregularities (such as geometric irregularity, massive irregularity and etc.), it seems that its is necessary to present separate behavior factors in the fourth edition of the seismic standard (2800). As a result, the design engineers can .make accurate and appropriate predictions about the real behavior of the structure

کلمات کلیدی:

irregularity in height, pushover analysis, steel moment frame, SAP 2000

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/617502

