عنوان مقاله:

Evaluating the behaviour of composite columns with stiffened steel profile based on elastic buckling load analysis

محل انتشار:

کنفرانس بین المللی دستاوردهای نوین در مهندسی عمران، معماری، محیط زیست و مدیریت شهری (سال: 1394)

تعداد صفحات اصل مقاله: 10

نویسنده:

Amir Parviz Khosravi Amiri - *Lecturer of Islamic Azad University , young researchers and elite club, roudehen branch, Islamic azad University, roudehen, Iran*

خلاصه مقاله:

A steel-concrete composite column is a compression member, comprising either a concrete encased hot-rolled steel section or a concrete filled tubular section of hot-rolled steel and is generally used as a load-bearing member in a composite framed structure. In recent years, the use of embedded steel concrete columns has been increased noticeably in concrete frame structures. In this study the numerical modeling of unique steel and composite frames are performed in ABAQUS software. The main objective was to determine the optimum ratio for steel/ concrete to achieve the most buckling load. By division of load to area, we can use an index to check if this loading rise is economic or not. The result shows that the optimized ratio is 5% for most economic buckling capacity. Finally, evaluating the behaviour of composite columns with stiffened steel profile consisting of simple profile, delta profile and .longitudinal stiffened profile, based on elastic buckling load analysis is performed

کلمات کلیدی:

Concrete structures, composite columns, buckling behaviour