

عنوان مقاله:

Castellated and common cruciform steel columns under lateral cyclic loading

محل انتشار:

چهارمین همایش بین المللی مهندسی سازه (سال: 1396)

تعداد صفحات اصل مقاله: 10

نویسنده:

Ebrahim Farajpourbonab - *P.h.D candidate, S.P. Pune University, Pune, India*

خلاصه مقاله:

In the present study, a numerical study on the strength and hysteresis behavior of specially shaped castellated and common cruciform steel columns (CPE and IPE steel sections) by the application of ABAQUS software has been investigated under lateral cyclic loading. The deformation, hysteresis loops, strengthening of steel section, ductility and energy dissipation capacities of castellated and common cruciform steel columns has discussed and the effect of types of steel sections, web and flange boost of steel section, and length variations of samples are reviewed. Finite-element analysis is carried out based on initial geometric imperfection and geometric nonlinearity. The experimental results are close to the finite-element analysis results, which shows that the castellated cruciform steel columns has excellent ductility and energy dissipation capacity in comparison with the common cruciform steel columns. The study evidenced that CPE steel columns can be used in seismic region. This study can provide background for practical engineering applications and design specification for CPE steel sections

کلمات کلیدی:

castellated cruciform steel columns; FE analysis; hysteresis behavior, strengthening of steel section

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/879647>

