

عنوان مقاله:

Experimental Study on Performance of Fiber Concrete-filled Tube Columns under Axial Loading

محل انتشار:

ماهنامه بین المللی مهندسی، دوره 32، شماره 12 (سال: 1398)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Abbas H. Mohammed - *Department of Civil Engineering, University of Diyala, Diyala, Iraq*

Raad D. khalaf - *Department of Civil Engineering, University of Diyala, Diyala, Iraq*

Taha K. Mohammedali - *Department of Civil Engineering, University of Diyala, Diyala, Iraq*

Ali K. Hussin - *Department of Civil Engineering, University of Diyala, Diyala, Iraq*

خلاصه مقاله:

There have been great developments in the area of civil engineering in the recent few decades and among these, construction and material innovation are quite prominent. Steel-concrete composite construction has emerged as one of the fastest methods of construction. Even though considerable research efforts on conventional reinforced concrete columns have been executed prior to now, concrete filled steel tube (CFST) composite columns however have received limited attention. This work aims to study the experimental behavior of steel tubular specimens. Plastic and steel specimens are considered with circular and square sections filled with the concrete with the steel fiber and as well, plain concrete. Four parameters are considered in this study which are sectional designs (circular and square), tube thickness (2 and 5 mm), tube material (plastic and steel) and content of steel fiber (0 and 5%). Ten concrete filled steel tubular columns were cast and tested. Two circular columns were made from plastic and the other made from steel. The main purpose of this work are study the effect of steel fiber and cross section on the ultimate load capacity of columns. It was discovered the utilization of steel fiber reinforced concrete filled steel tubular columns have comparatively substantial stiffness in comparison with plain concrete filled columns.

کلمات کلیدی:

Steel Tube, Concrete, Steel Fiber, Axial loading, Columns, Composite

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1021632>

