

Seismic Behavior of Partial Connected Beam-Column Joint of Circular Tubed Steel-Reinforced and Deformed bar High-Strength Concrete Columns

Abraham Kefelegn*

Department of Civil Engineering, Arba Minch University, Addis Ababa, Ethiopia

Case Description

Expect to possess high capacity, high ductility and an extraordinary energy absorption capacity. Expect we can control shear failure under concentric loading high-strength concrete columns may be widely used in high-rise buildings and seismic regions (Figures 1 and 2) [1].

For this aim, a 3-D finite element model of circular tubed steel-reinforced and deformed bar with stirrup column columns using ABAQUS or ANSYS program will be developed and validated [3]. Three-dimensional finite element analysis of compressive behavior of circular tubed steel reinforced with deformed bar high-strength concrete columns by new confinement relationships [4].

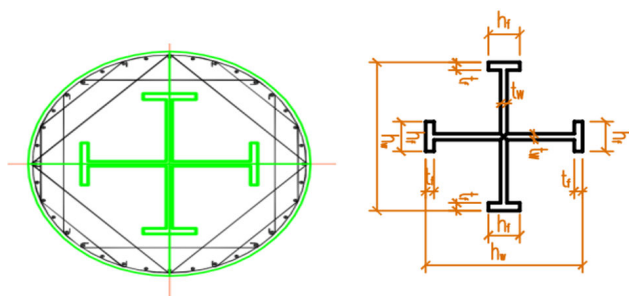


Figure 1. 3-D Finite element model of circular tubed steel-reinforced.

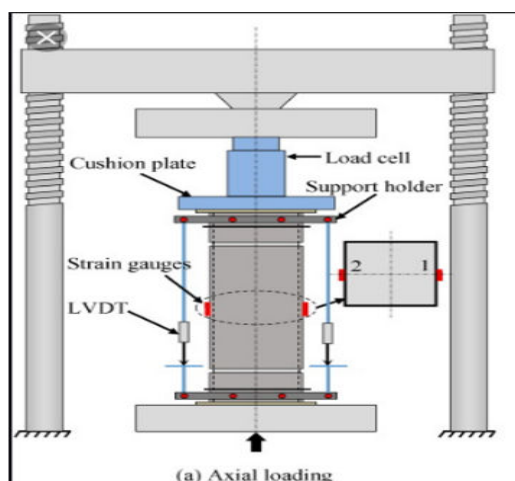


Figure 2. Deformed bar with stirrup columns.

References

1. Guan, Minsheng, Xinsen Zheng, Ying Wang and Qian Xiao, et al. "Seismic Performance of Innovative Adaptive-Slit Composite Structural Walls with Ultra-High Axial Compression Ratio." *Bull Earthquake Eng* (2022): 1-24.
2. Lees, Janet Marillyn. "Fibre-Reinforced Polymers in Reinforced and Prestressed Concrete Applications: Moving Forward." *Prog Struct Eng Mater* 3 (2001): 122-131.
3. Beirami Shahabi, Ali, Gholamreza Zamani Ahari and Majid Barghian. "Base Isolation Systems-A State of the Art Review According to their Mechanism." *J Rehabil Civ Eng* 8 (2020): 37-61.
4. Afefy, Hamdy M. "Seismic Retrofitting of Reinforced-Concrete Coupled Shear Walls: A review." *Pract Period Struct Des Constr* 25 (2020): 03120001.

How to cite this article: Kefelegn, Abraham. "Seismic Behavior of Partial Connected Beam-Column Joint of Circular Tubed Steel-Reinforced and Deformed bar High-Strength Concrete Columns." *J Steel Struct Constr* 10 (2024): 208.

*Address for Correspondence: Abraham Kefelegn, Department of Civil Engineering, Arba Minch University, Addis Ababa, Ethiopia; E-mail: lonbo2005@gmail.com
Copyright: © 2024 Kefelegn A. This is an open-access article distributed under the terms of the creative commons attribution license which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

Received: 01 June, 2024, Manuscript No. JSSC-24-3208; Editor assigned: 02 June, 2024, Pre QC No. P-3208; Reviewed: 17 June, 2024, QC No. Q-3208; Revised: 23 June, 2024, Manuscript No. R-3208; Published: 30 June, 2024, DOI: 10.37421/2472-0437.2024.10.208