

## Eccentric Loading of CFDST Columns

**Authors :** Trevor N. Haas, Alexander Koen

**Abstract :** Columns have traditionally been constructed of reinforced concrete or structural steel. Much attention was allocated to estimate the axial capacity of the traditional column sections to the detriment of other forms of construction. Other forms of column construction such as Concrete Filled Double Skin Tubes received little research attention, and almost no attention when subjected to eccentric loading. This paper investigates the axial capacity of columns when subjected to eccentric loading. The experimental axial capacities are compared to other established theoretical formulae on concentric loading to determine a possible relationship. The study found a good correlation between the reduction in axial capacity for different column lengths and hollow section ratios.

**Keywords :** CSDST, CFST, axial capacity, hollow section ratios

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020