

**STRUCTURAL PERFORMANCE OF STEEL FIBER REINFORCED
CONCRETE TWO-RIBBED WALL PANEL UNDER COMPRESSIVE
LOAD**

By

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DECLARATION BY THE CANDIDATE

I, Wan Azlina Binti Wan Mohd Yusoff, UiTM No.2011162015 declared that the work in this report is my own works except the idea and summarizes which I have clarified their sources. The appropriate credit has been given where references have been made to the work of other researchers.

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ABSTRACT

This study deals with structural performance of two-ribbed wall both samples reinforces with steel fibre except one without steel fabric. Laboratory works tested two walls sample with size 1500mm x 1000mm x 75mm (height x length x width). The wall samples reinforced with steel fabric size B7 and steel fibre HE 0.75/60 with concrete grade 30. The wall panel tested under axial load connected to hydraulic jack with 2000 kN of capacity limit. The support condition of both walls is Pinned-Pinned. Analysis of results was done based on the ultimate load carrying capacity, wall displacement, mode of failure and cracking pattern. From experimental work, the ultimate load carrying capacity for wall with steel fabric (WSF) was 1590 kN and 1158.2 kN for wall without steel fabric (WOSF). Meanwhile, the theoretical calculation is 1177 kN and 999.34 kN respectively. Furthermore, the horizontal displacement was 10.79 mm for WSF and 22.84 mm for WOSF. The location of the maximum displacement is located at 1050 mm from the bottom while wall WOSF occurs approximately at 1350 mm (about 0.7H of the wall height). Wall WSF experienced crushing at the top end along load distribution area.

Keywords: Two-ribbed wall, steel fibre, steel fabric.

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