

**STRUCTURAL PERFORMANCE OF STEEL FIBRE REINFORCED
CONCRETE (SFRC) 3-RIBBED WALL PANEL WITHOUT STEEL
FABRIC UNDER AXIAL LOAD**

By

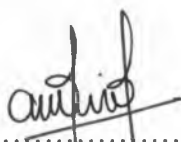
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DECLARATION BY THE CANDIDATE

I NUR AMIRA BINTI MOHD ZAHIS, 2010324641, confirm that the work in this report is my own work and the appropriate credit has been given where references have been made to the work of the other researchers.

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ABSTRACT

STRUCTURAL PERFORMANCE OF STEEL FIBRE REINFORCED CONCRETE (SFRC) 3-RIBBED WALL PANEL WITHOUT STEEL FABRIC UNDER AXIAL LOAD

Steel fibre reinforced concrete (SFRC) ribbed wall panel as precast component was introduced to reduce the amount of concrete and bar reinforcement in concrete element. SFRC ribbed wall panel are lighter and has higher tensile. The precast ribbed wall panel is also a sustainable construction component due to the reduction of concrete amount. The aim of the study is to determine load carrying capacity and displacement of steel fibre reinforced concrete 3-ribbed wall without steel fabric and to evaluate its mode of failure and crack pattern under axial load. To achieve the aim of study, test was conducted on two different wall which is plain and 3-ribbed wall panel. Plain wall panel was designed as control sample and test was conducted at Heavy Laboratory Structure in UiTM, Shah Alam, while 3-ribbed wall panel was analyzed from finite element analysis and conduct by previous master student. Both result for both walls were compared. From the result analysis, the ultimate load for 3-ribbed wall panel 1855.16 kN and for plain wall panel is 1686.30 kN which is 9.1% lower than the 3-ribbed wall. This shows that the 3-ribbed wall panel have better performance interm of carrying load compare to plain wall panel.

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