

## **Stress-strain relationships of composite foamed concrete panel with different number of shear connectors under compression**

### **ABSTRACT**

The present of the shear connectors with the sandwich composite foamed concrete panel system is to increase the strength of the panel. Therefore the objectives of experiment on effects of the shear connectors spacing is to determine the influence of shear connectors spacing on the axial stress-strain curve, to observe the failure mode sandwich composite foamed concrete panel system with different shear connectors spacing, and to establish ultimate load carrying capacity of different shear connectors spacing. In this study, there are four samples of shear connectors spacing which are 5, 7, 9 and 13 to composited foamed concrete with density of 1400 kg/m<sup>3</sup> and 700 kg/m<sup>3</sup>. This study has showed the enhancement of ultimate compressive strength with increasing numbers of mechanical connectors. The failure of mode observed proved that sandwich panel failures decreasing with enhancement numbers of mechanical connectors, thus sandwich panels can sustained ultimate load carrying capacity.

**Keyword:** Lightweight foam concrete; Sandwich panel; Axial load; Stress-strain