Study on Flexural Performance of Composite Slab Using EPS as Core with HPC as Bottom Wythes

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ABSTRACT

Sandwich construction is a new technology. composite sandwich slabs are nowadays used for the best optimality in strength and cost. By introducing the sandwich into the slab can reduce the concrete portion. Precast construction technology is the one which rightly suits for today's world of quicker construction without compromising quality or even with improved quality and performance. Precast composite sandwich slabs are one of the crucial developments in this aspect. Apart from faster in construction, composite technology yields good economy and additional benefits of versatile performance such as light in weight, insulation. In this study composite sandwich slabs made with Expanded Polystyrene (EPS) panels as core and self-compacting concrete and steel fibre reinforced concrete as the top and bottom wythes respectively has to be casted with dimensions of two-way slab as 1.2 m x 1 m x 0.8 m and test for flexural action will be done to compare their performance with conventional reinforced concrete (RC) slabs. Three different slabs are planned to cast to investigate the effect of SFRC in failure mode of the slabs and its flexural performance over the conventional slabs with cost effectiveness are selected as study parameters. Experimental study and result analysis will be carried out

Keywords: *Flexural behavior, Composite sandwich slab, EPS*