

Flexural behavior of one-way ferrocement slabs with fibrous cementitious matrices

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ABSTRACT Concrete compressive strength enhancement is considered as one of the popular topics in the field of civil engineering. It has received a massive attention by material and structural engineers over the past decades. The aim of this study is to investigate thin mortar matrix for the impacts of the combination of reinforcing steel meshes with discontinuous fibers, and to do this, one-way Ferrocement slabs were tested under bending with steel fibers and meshes, focusing more on the number of mesh layers (1, 2, & 3) as the studied parameter. The percentages of fiber content as volumetric ratio 0.25, 0.5 and 0.75 and type of fibers golden steel fibers and waste aluminum fibers from waste metallic cans. Results showed that at general the adding of fibers regardless of its type increased the ductility of tested slabs. In addition, results showed that steel fibers are more effective than aluminum fibers.