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P110. Mechanical Properties of Layered Fiberconcrete

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Fiberconcrete is important material for load bearing structural elements. Traditionally fibers are homogeneously dispersed in a concrete. At the same time in many situations fiberconcrete with homogeneously dispersed fibers is not optimal (majority of added fibers are not participating in loads bearing process). Is obvious, that is possible to create constructions with non-homogeneous fibers distribution in them, in different ways [1,2]. Present research is devoted to one of them. In the work fiberconcrete prisms were created with non-homogeneous layered fibers distribution inside them.

Layered beams with layers having different fibers content in plies were fabricated. Beams were tested under four point bending conditions. The technology of specimen preparation is described in the RTU Latvian invention patent Nr. LV14667B [3].

In the present research three different types of layered prisms with the same fibers amount in them, were experimentally produced (four samples with dimensions 10×10×40 cm were fabricated for each type as well as for reference, four prisms with homogeneously dispersed fibers were produced also). Prisms were tested under four point bending conditions till crack.

Keywords: *steel fibers, fiberconcrete, non-homogeneous fiber reinforced concrete, layered fibers' distribution.*

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