

## عنوان مقاله:

The evaluation of compressive strength of magnetic concrete containing steel fibers

## محل انتشار:

اولین کنفرانس بین المللی عمران و مهندسی خاک و پی (سال: 1398)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

Concrete is known as a brittle material with poor tensile strength, where the use of steel fibers causes to improve the strength, ductility and also energy dissipation of concrete. In addition, it seems that magnetic field can affect the mechanical behavior of concrete containing ferromagnetic materials. In the present study, the effect of magnetic field on compressive strength of steel fiber reinforced concrete with the volume fractions of 0.4, 0.7 and 1 percent has been investigated. To achieve this aim, compressive strength test was carried out on cubical concrete specimens with the dimensions of 10 x 10 x 10 cm at the ages of 7 and 28 days. The results showed that magnetic field can increase compressive strength of concrete with the volume fractions of 0.4, 0.7 and 1 percent up to 15, 17 and 16 percent at the age of 28 days, respectively. These amounts were resulted at the age of 7 days up to 14.7, 17.3 and 16.5 percent, respectively.

## کلمات کلیدی:

Magnetic field, Concrete, Steel fiber, Compressive strength, Ferromagnetic materials

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1000999>

