

Abstract Submitted
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Investigation of Basalt Fibres in Concrete JAHİ PALMER, EDWARD KINTZEL, KEITH ANDREW, Western Kentucky University — Mechanical properties of concrete are most commonly determined using destructive tests including: compression, flexure, and fracture notch specimen tests. However, non-destructive tests exist for evaluating the properties of concrete such as ultrasonic pulse velocity and impact echo tests. One of major issues with concrete is that unlike steel it is quasi-brittle material. It tends to want to crack when tensile stresses develop. Fibers have been added to concrete for many years to help with temperature and shrinkage cracks. In more recent years, the concepts of adding fibers to concrete have been explored. Some possibilities include developing concrete that may be more durable, flexible, stronger, less permeable, and potentially “crack free” than traditional concrete. It has become important test to improvements that the fibres make to the concrete as well as testing the general strength of concrete to stand up to constant pressure at varied strengths. Increasing the rate at which a stress load is added to concrete will lessen the amount of time it takes for the concrete to fail.

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