

AN EXPERIMENTAL STUDY ON THE
STRENGTH AND IMPACT RESISTANCE
OF STEEL FIBRE REINFORCED CONCRETE

by :

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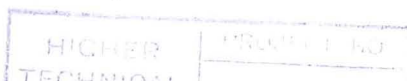
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ABSTRACT

This project deals with objectives related to the Strength and Impact resistance of Steel-Fibre-Reinforced Concrete.

It is generally recognised that short lengths of chopped steel wires uniformly distributed throughout a concrete or mortar matrix, result in a considerable improvement in performance.

Concrete so treated is called Steel-Fibre-Reinforced Concrete and some of its many advantages over ordinary concrete include:

- Flexural Strength
- Ductility
- Impact and Fracture Toughness
- Crack Control
- Resistance to Wear and Abrasion.

The main objectives of this project are the establishment of the effect of steel fibres on the flexural and shrinkage behaviour, impact resistance and compressive strength of Steel-Fibre-Reinforced Concrete.

Moreover a study of the main types and characteristics of fibres in general is carried out.

The whole project consists of four chapters. The first chapter deals with a historical background, the main types of fibres, their characteristics and their advantages over ordinary concrete. The second chapter refers to a past research on various characteristics of steel-fibre-reinforced concrete.

Finally, the last two chapters deal with the experimental part, as well as with general conclusions, recommendations for future work and limitations of present work.

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