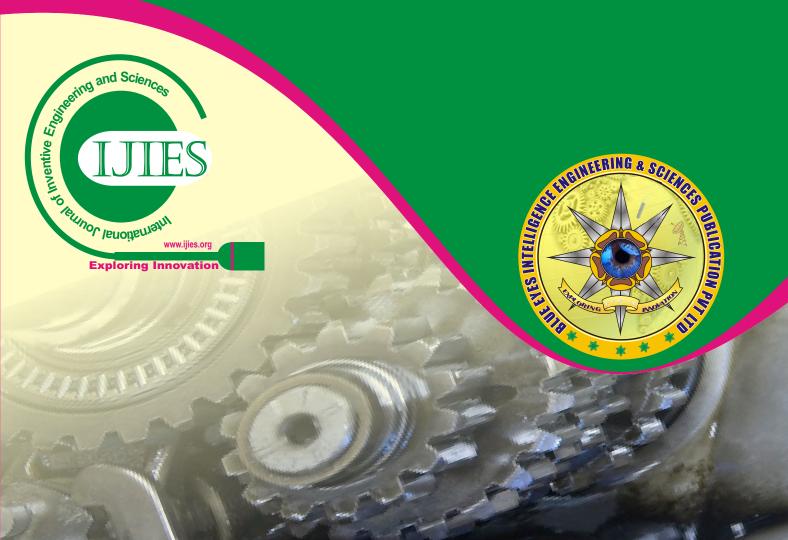


ISSN : 2319-9598 Website: www.ijies.org **Volume-3 Issue-11, November 2015** Published by: Blue Eyes Intelligence Engineering and Sciences Publication Pvt.



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Authors:	A. A. Elsayed
Paper Title:	Improving of Impact Resistance of Concrete using Innovative Shapes of Steel Fibres
Abstract: Concre blasts, traffic, and this research, two shape is introduce designed to study The two shapes of strength of steel f concrete. The com volume fraction re with increasing of fraction. The split with the increase toughness index o I20 registered value enhanced with increase and 35.8, respecti- fiber content up to The impact resista	the is often subjected to impact and other dynamic loads in service. These loads may occur due to seismic activity. To enhance the impact resistance of concrete, many types of fibers can be used. In shapes of steel fibers are used: hook-ended shape (SF) and a new spiral shape (SSF). The innovative d manually in fresh concrete with suitable vertical and horizontal alignment. The test program is the effect of SF, and SSF on the impact resistance of concrete and selected mechanical properties. It is steel fibers were added at the fraction volume of 0.5%, 1.0%, 2.0%, and 3.0%. The compressive ibers reinforced concrete (SFRC) enhanced by 43.4% at 2.0% volume fraction relative to plain upressive strength of spiral steel fibers reinforced concrete (SSFRC) enhanced by a 65% at 3.0% enhancement, respectively, at 2.0% volume ting tensile strength and modulus of rupture of SFRC improved in volume fraction up to 3.0%, recording 147% and 62.5% enhancement, respectively. Also, The f SFRC enhanced with the increase in the fraction up to 2.0%. The toughness indices I5, 110, and tes of 10.7, 20.5, and 35.1, respectively, at 2.0% fraction volume. The toughness index of SSFRC* reasing the fraction volume. The impact resistance of SFRC improved with the increase in the 2.0%, recording 33 times that of the impact resistance of SFRC improved with the increase in the fiber volume fraction recording 116 times the of plain concrete, at 3.0% fraction volume.
	broced Concrete; Steel Fibers; Strengthening; Impact; Mechanical Properties.
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