

# Experimental Study on Fibre Reinforced Concrete

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**Abstract:** In recent years the applications of high strength concrete have increased many parts of the world. This growth has been possible as a result of recent developments in technology and demand for high strength concrete. There are many advantages in using high strength concrete in building construction. As in the case of conventional concrete, the use of steel fiber substantially increases the energy at break of high strength concrete. Although the initial cost may be high. Significant long-term saving would be ensured in reducing the needs for maintenance, repair and rehabilitation. Use of Steel Fibers in normal cement concrete improves Compressive strength of the concrete and helps to improve the serviceability of the structure. The experimental program was designed to the effect of steel fibers on compressive strength testing by using UTM machine on cubes of size (150mmX150mmX150 mm). The mix proposition for M30 grade of concrete. Then, the steel fiber were added in the unique proportions of 0.5%, 0.7% and 1%.

**Keywords:** Steel Fiber, Concrete, Compressive Strength

## REFERENCES

- [1]. UtkarshR.Nishane “experimental studies on fiber reinforcement concrete”, 2017, vol. 7, pp = 40-44.
- [2]. Hamid PesaranBehbahani “Different Types of Fibers”, “Steel Fiber Reinforced Concrete: A Review”, 2011, pp = 2.
- [3]. Mr. K. C. Denesh<sup>1</sup> , V. Senthilkumar<sup>2</sup>, “Material And Properties”, “Experimental Study on The Steel Fiber Reinforcement Concrete”, Volume 11 Issue I Jan 2023, pp = 2-4.
- [4]. Anurag Mishra, Prof. Kirti Chandraul<sup>2</sup>, Prof. Manindra Kumar Singh<sup>3</sup> “Material And Methodology”, “Experimntal Study on Steel Fiber Reinforced Concrete”, Volume: 04 Issue: 11 | Nov -2017, ISO 9001:2008 Certified Journal, pp = 895-896.
- [5]. Avinash Joshi , Pradeepreddy ,Punithkumar and Pramodhatker “History of FRC.”, “Experimental Work on Steel Fiber Reinforcement Concrete”, Volume 7, Issue 10, October-2016, ISSN 2229-5518, pp = 971-972.
- [6]. The Euclid Chemical Company, “Performance-Based Specification ForFiber-Reinforced Concrete (FRC).”, “Euclid Chemical”.