International Journal of Civil Engineering and Technology (IJCIET)

Volume 8, Issue 1, January 2017, pp. 704–711 Article ID: IJCIET_08_01_082 Available online at http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=8&IType=1 ISSN Print: 0976-6308 and ISSN Online: 0976-6316

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Scopus Indexed

EXPERIMENTAL STUDIES ON STRENGTH AND SCC CHARACTERISTICS OF BASALT FIBER REINFORCED CONCRETE

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ABSTRACT

Concrete is second most widely used material other than water, its more versatile but modern day engineering structures require more demanding concrete owing to the huge applied load on smaller area and increasing adverse environmental conditions. Many materials were studied as impregnation agents to concrete to enhance its quality, strength and durability, in this work we had tried to utilize Basalt fiber as a strength enhancement agent in Self compacting concrete to obtain higher strength values in tandem with good workability. Promising results were obtained in the self compacting nature by using simple admixtures such as VBA, workability agents etc. Rheological properties obtained suggested that the concrete is not only highly workable but also possess high durability and versatility. The SCC slump value varied from 620 to 760 mm with good compressive strength in the range of 25-32 N/mm².

Keywords: SCC, Basalt fiber, durability characteristics

Cite this Article: S. Paulraj, Dr. N. Balasundaram, K. Sates Kumar and M. Dharshna Devi. Experimental Studies on Strength and SCC Characteristics of Basalt Fiber Reinforced Concrete. *International Journal of Civil Engineering and Technology*, 8(1), 2017, pp. 704–711. http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=8&IType=1