

# Self-Compacting Concrete using Silica Fume, GGBS and SCBA

**Prof. P. S. Kadam, Sanjay Gokul Sonar, Sunil Prakash Sangale, Prasad Shivaji Deshmukh, Pratik Rajendra Deshmukh,**  
Department of Civil Engineering  
Adsul Technical Campus, Faculty of Engineering, Chas, Ahmednagar  
Savitribai Phule Pune University, Pune

**Abstract:** Concrete is a most widely used construction material in the world. As the use of concrete becomes almost a necessary the specifications of concrete like durability, quality, workability and compactness of concrete becomes more important. Conventional concrete is cast normally in the form of vibration in order to move the concrete to all corner of the form work, removes entrapped air, and to fully surround the reinforcement. With the introduction of the latest generation of super plasticizing admixtures it became possible to produce concrete that does not require mechanical vibration, thus leading us to so called Self Compacting Concrete (SCC). This SCC has proved beneficially and economically because of some factors. The requirement led to the development of SCC and its development was first reported in 1989. Self-Compacting Concrete is also a type of high performance concrete that has high workability and Self Compacting nature, i.e. the compaction occurs because of high flowing nature and there is need for external vibrators for compacting purpose. The concrete is cohesive enough to escape bleeding or segregation. For production of Self compacting in order to achieve the water cement ratio should be kept as much as the minimum.

**Keywords:** seed-sowing robot

## REFERENCES

- [1] T. I. Dhiyaneshwaran, S. Ramanathan, P. Baskar, I. and Venkatasubramani. R- Study an Durability Characteristics of Self-Compacting Concrete with Fly Ash Jordan Journal of Civil Engineering Volne 7, No. 3, 2013
- [2] Raissa P. Dougkis Properties of Self-Consolidating Concrete Containing Type F Fly Ash - PCA R&D Serial No. 2619.
- [3] Arivalagan S Experiments Analysis of Self-Compacting Concrete Incorporating different range of High-Volumes of Class F Fly Ash Scholars Journal of Engineering and Technology (SJET) Sch. J. Eng. Tech. 2013: 1(3):104-111.
- [4] Mio Liu Wider Application of Additions in Self-Compacting Concrete Thesis submitted to University College London, for the degree of Doctor of Philosophy.
- [5] R Getti J Izquierdo, PCC Gomes, A Josa Development of high-strength self- compacting concrete with fly ash: a four-step experimental methodology 27th Conference on Our World in Concrete & Structures: 29 30 August 2002, Singapore. Artick Online Id:100027026.
- [6] Deepa Bakikrishnan S., Paukose K.C "Workability and strength characteristics of self- compacting concrete containing fly ash and dolomite powder American Journal of Engineering Research (AJER) e-ISSN: 2320-0847, p-ISSN: 2320-0936 Volume -2.
- [7] Dr. Sablaklein Akadey Influence of Superplasticizer on Concrete International Journal of Research in Engineering and Technology (ERT) Vol 1, No. 3, 2012, ISSN 2277 4378.
- [8] Tann R Naik, Yoon-moon Chun, Rakesh Kumar and Bruce W. Ramme "Development of High-Strength Self-Consolidating Concrete' Report No. CBU- 2003-14, REP-508, Department of Civil Engineering and Mechanics, College of Engineering and Applied Science. The University of Wisconsin-Milwaukee.
- [9] Rua Okrajnov-Bajić, Dejan Vasović Self-compacting concrete and its application in contemporary architectural practise SPATIUM International Review UDK 666.97.033.14. No. 20, September 2009, P. 28-34 Review paper.

[10] Okamura, Hajime, Ouchi, Masahiro Self-Compacting Concrete Journal of Advanced Concrete Technology, 1(1): 5-15, 2003. Liana lures and Comeliu Bob- The Future Concrete: Self-Compacting Concrete" - Bul Inst. Polit. Iași LLVI (LX), 1, 2010.

[14] Ms. Priyanka P. Naik, Prof M. R. Vyawahare "Comparative ady of Effect of Silica Fune and Quarry Dust on Strength of Self-Compacting Concrete" International Journal of Engineering Research and Applications (JERA), ISSN: 2248-9622, Vol 3, Issue 3, May-Jun 2013. pp. 1497-1500.