

## COMPARATIVE STUDY OF PROPERTIES OF SELF COMPACTING CONCRETE WITH METAKAOLIN AND CEMENT KILN DUST AS MINERAL ADMIXTURES

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### ABSTRACT

Self compacting concrete is highly flow able yet stable concrete that can spread readily into place and fill formwork without any consolidation and without undergoing significant separations. In general SCC results in reduced construction times and reduced noise pollution.

It is need of time to enhance the utility of SCC in respect with speedy construction such as works of retrofitting and to improve the permeability & early age strength. In view of these, high pozzolanic material as Metakaolin (MK) was used in SCC as a replacement of the cement.

An attempt has been made to study the behavior of SCC with MK & CKD as mineral admixtures and understands the effect of these mineral admixtures on fresh & hardened properties of SCC and also investigate the compatibility of above minerals powders in SCC along with chemical admixture such as super plasticizers. Considerable enhancement in self compact ability & hardened strength of SCC was observed at 10% replacement of cement by MK & CKD.

**KEYWORDS:** Self Compacting Concrete (SCC), Metakaolin (MK), Cement Kiln Dust (CKD), Modified Nan-Su Method, Flow Ability, Passing Ability, Resistance to Segregation