ABSTRACT

In this project work, an attempt will be made to study the strength of self-curing self-compacting concrete with different type of self-curing admixtures. This research is proposed to adding chemical admixtures and pozzolanic material for making self-compacting concrete (SCC). Also, it is proposed to use self-curing compound instead of conventional or ambient water curing. Many researchers studied about the self-compacting concrete only and not for self-compacting and self-curing concrete, but this study proposed a methodology for self-compacting and self-curing concrete. Self-Compacting Concrete (SCC) is achieved by reducing the volume ratio of aggregate to cementitious materials, increasing the paste volume by using fly ash and super plasticizer (SNF). Ordinary Portland Cement (OPC) was partially replaced by fly ash by 25% by weight. Super Plasticizer was added by 5% by weight of cement in all the mix. OPC mix without fly ash was treated as control concrete. Workability studies such as Slump flow test, V– Funnel test, and U- Box and L– Box method were performed and Strength related tests such as Compressive test and Split tensile test were performed at 28 days.

The self-curing technique is part of water retaining technique using various methods. In this paper self-compacting self-curing concrete (SCSCC) has been studied using Polyethylene Glycol 400 (PEG400) and Polyethylene Glycol (PEG 6000) as admixtures. The specimen with 2% PEG400 and PEG6000 is compared to the conventional specimen.