

**A STUDY ON SETTING TIME OF CEMENT**

A PROJECT REPORT PRESENTED

BY

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**ABSTRACT**

The setting time is a very important quality parameter of cement, since it determines the working time of the cement. If a certain cement sets very quickly, it means that the working time is very short. Some applications require long working time to complete the work, for which, the cement with the short setting time is not suitable. On the other hand, some other applications require short working times, and it is better to use cement with short setting time. Thus, cement must be selected according to the application, paying heed to the setting time.

The correlation between the setting time and the  $\text{SO}_3$  content of the cement was studied. For this purpose, a number of experiments were performed on several cement samples collected from different manufacturers. The setting time was estimated by using the Vicat's apparatus and a chemical method was used to determine the amount of  $\text{SO}_3$  content. The average values of test results obtained in this research were recorded and analysed.

It was observed that the setting time increases with increment of the  $\text{SO}_3$  content of the cement. This is in agreement with the previous work done by P F G Banfill (Liverpool University, UK). In addition, it was noticed that larger changes in the higher amount of  $\text{SO}_3$  content gave a slight variation in the longer setting times. These types of cement can be recommended for use in very critical work such as construction of complicated shapes and decoration work in the worship places.