

Compare the Strength Of Cement Mortar vs Lime Mortar

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ABSTRACT

Cement Mortar Test are made with varied percentage of sand, cement, lime may varied accordingly depends on need. The addition of lime in the cement mortar is very less because excess addition may cause increase in percentage of water with same consistence. Hence the shrinkage may also occur. The addition of lime does not increase the strength of concrete. The concrete strength is increase only we add limited and needed water. The addition of lime is nothing it just increase the density of cement mortar that's why lime is added. Hence the usage of lime only increase the workability and it is also low economic rate. Depend on the need of work the cement mortar water proportion is differ, There is always one question whether it is suitable or not so use of lime is the answer for this. The desirable changes in anyone material will affect other work also. In this exact result may not occur due materials change ,sand and also the climatic condition, storage condition.

Keyword : - cement, lime, concrete.

1. INTRODUCTION

To increase workability and to reduce the cost Portland cement mortar and lime is added. Due to Portland cement mortar and lime the strength is High and reduce in setting time. To fine the effect of the admixtures there are so many test have been done. It seems to give further study of cement-lime mortar to give more properties but the work might be changes due to different proportion .

1.1 Materials

The materials used for cement and lime-mortar includes Portland cement, High calcium Manson's Hydrated lime and River sand is used. Depends on the proportion of each materials the quantity increase by 5 to 10 per cent by weight based on the dry mix. These are used in compressive strength and Tensile Test.

1.2 Cement and Lime

Cement is only a Binder. The important use of cement is used to make a mortar. When it combines with aggregate it gives a strong building materials .But when it comes to Lime ,Lime is a raw material .Lime is alkaline substance it contain calcium oxide. also lime is the major ingredient for all the buildings and monuments. There is an artificial lime is also available.

2. TEST ON CEMENT-LIME MORTAR

The material used for batch are weighed and Dry mixed. Then water is added so that it is wetted and worked well. The slump must be one-half inch. The water is calculated as per cent of dry materials. There are totally 6 cubes were made. For Tensile Strength ,Standard cement moulds are used and the moulds are removed after 24 hours. Depends on ageing of moulds the tests were made. The compressive strength test also made at the age of 7 days. Compressive strength should be 4 to 5 times of the Tensile Strength. The setting Time were detected by means of Vicat's apparatus.



Chart -1: Mortar cubes



Fig -1: Lime Concrete

2.1 Mortar Type

Table -1: Mortar Types

Mortar type	value	% Of cement	% Of Lime
M	3200	100%	--
S	2200	67%	35%
N	1400	50%	50%
O	1000	33%	67%
K	750	---	100%

3. CONCLUSIONS

There are so many number of cement available, but there is only wrong application on it. Lime and Portland cement are equally useful. For workability condition, water is added more there is only density of concrete is higher not the strength. So concrete mortar is high strength when compared lime concrete.

4. REFERENCES

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BIOGRAPHIES (Not Essential)

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