

STUDY THE USE OF WOOD DUST TO REPLACE HALF OF THE SAND IN THE CONCRETE MIX

Abstract:

The purpose of this study is to determine the effects of wood dust on concrete strength and workability. Two type of testing were conducted to get the result. The tests are slump test and compression test. 27 cube samples of concrete including control samples were prepared for this study. Concrete were designed based on grade 20 at 7 days and water-cement ratio is 0.58. Wood dusts were used as a replacement material for sand in a proportion 50% and 100%. Control samples are used as a guide and result will be compared with the data of control samples. For conclusion, the value of workability and compressive strength were decreased when more of wood dusts were added into concrete mix..

Keyword: wood dust, concrete

IP no:

Finding:

Compressive Strength Test

Sample to replace fine aggregate	Average of compressive strength test (N/mm ²)		
	A	B (50%)	C (100%)
1 day	6.802	2.824	0.829
7 day	9.584	7.016	2.072
28 day	27.26	17.65	5.18

In conclusion, when the use of wood dust that is widely used in concrete mixes it will affect their compressive strength.

Suggestion for future work

- i. Running studies in more detail to obtain accurate results and excellent.
- ii. In terms of timeliness, the concrete mix should use a long time while mixing some materials so that the concrete mix can be produced with more quality.
- iii. The materials used for brewing the concrete must be measured properly so that the concrete produced will be meet the specifications.
- iv. Make sure wood dust is not too large before being mixed with cement and sand as it will affect the neatness of the product.
- v. Before making a study should be to find someone more a professional to increase knowledge in exactly what we will do.

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