
BY USING GRANITE FINE EVOLUTION OF HOLLOW CONCRETE BLOCK**A REVIEW**

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ABSTRACT

Nowadays, in the world, using granite fine in solid waste management becomes a major environmental concern. Awareness should be increased about landfill space, cost-increasing issues, and using waste materials like granite fine have become alternate content. We have spotted from this work, granite is fine and used in multiple proportions in the manufacturing process of hollow concrete block socks. In this work hollow blocks are manufactured, of size 300mm*150mm*150mm using granite fine as a supplement. The waste of granite fine can be applied for the preparation of concrete and coarse aggregate partially replaced to get more workability of concrete due to the exciting massively high cost of course aggregate. The weight of granite fiwaswere added to 0,14.5,27,38.5 and 55. The concrete block was tested for compressive strength for 7,14 & 28 days after this test result,the proportion of hollow concrete block made 1:3:5 mix using 30% granite fine replaced with course aggregate gave 8.25 N/mm² to optimum compressive strength. So in this research using granite fine manufactured hollow concrete block gave a high performance and high strength.

Keywords- concrete, course aggregate, granite fine, strength, high performance.

I. INTRODUCTION**A- Blocks of Hollow Concrete.**

From this polishing unit granite fines were obtained was found as the specific gravity of granite fineIn the construction of walls concreteSeveral essentially used as a building material. Sometimes it is called a concrblocksasonry unit (CMU). Several precast concrete products which are used in construction is a concrete blocks. Before blocks ar toe brought to the job site the blocks are hardened and formed maybes the fact of the term precast refers. One or more blocks are in many concrstartlocks and sides may be the with a design and cast smooth. While usingconcrete block held toge, there, and start with new concretbindingrhe symmetricallythe wall and the impulse length.In 200 B.C. by the rththeans concrete mortar was used. For bind, the symmetdestructionped stack together n running construction of the building. Concrete technology developed, after the destructionof the designer's Empire,Was lost in the fifth century.In 1890 the patterns following concrete blockswere introduced or designed by Romen, Palmar in the United States. The design patterns in 1 are900 by Palmar after 10 years of experimenting.The gr and unitewere acquired from Bidadi. Granite fine content is 13% of sand particle size,72%of silt particle size, and 17.5% of clay particle size.As a care construction,the material in various forms of granite is widely used as an igneous rock Lots of waste strengthwas reduced in the granite industry. The granite density is between 2.44 to 2.67 g/cm³. Compressive strength was more than 150 Mpa.

II. EXPERIMENTA SETUP

Commonly used to make blocks of concrete is a mix of Portland cement, sand, gravel & water. This creates lite blocks with a fine texture of surface & compressive strength was high. Weight of concrete blocks 37-44 lb (16.3 - 20.2 kg).The concrete mix design used for making the blocks that are used for construction has a greater r percentage of sand & miner percentage of gravel, and water is added after the concrete mix is used for the making of hollow conc. blocks. When it's removed from the mold dry mixture holds its shape.

Cement- The (O.P.C.) ordinary Portland cement was used **GRANITE FINES:-** The granite fines were acquired from the limestone object. 2.9 was the specific gravity of granite fine & 0.33% was the average moisture

content. 10.3 was the coefficient of uniformity of granite fine.

Sand- The sharp river sand was used & and free from dirt, clay, and any organic matter.

From 4.75 mm sieve sand was passing through. 2.76 was the specific gravity of sand. 0.80% with average moisture content.

2.75 was the coefficient of uniformity of the sand

Grading Of Aggregate- It is defined as the properties of various sizes in the aggregates. The grading has a substituted effect on the stability and workability of the mixture. For the particle size distribution of the sand mechanical sieving analysis was used.

Water- Fresh, colorless, tasteless, and odorless water was used which was free from any organic matter.

III. RESULTS

The results are presented in the table for which readings show compressive strength against the percentage replaced granite fines. When the blocks were made with a mix proportion of 1:4:8, noticed reading shows that the percentage of 24% replaced granite fines gave the greatest compressive strength for all categories of hollow blocks of concrete.

IV. FURTHER SCOPE AND CONCLUSION

From the obtained results the conclusion are The compressive strength becomes greater with the age of blocks of hollow concrete. The compressive strength of the hollow concrete blocks improve by granite fines The compressive strength becomes greater from 0% to 23% granite fines substitute later than the fall of strength. For structural performance granite fines content shows the most effective replacement at 23%. A good degree of surface finish and edges which cement particles resulted in. The 4-hole hollow concrete block with a proportioned mixture of 1:4:8 took 28 days for compressive strength.

Conflict Of Interest

They have no conflict of interest declared by the authors.

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V. REFERENCE

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