

PARTIAL REPLACEMENT OF CARBON SOOT WITH CEMENT (CHIMNEY SOOT)

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ABSTRACT. Soot being the most readily available material and unique property material is used as a construction material. The soot is being replaced by cement by some certain percentage such as 5%, 10%,15%. The soot is the material which is highly responsible for climate change that is nearly 25%. In this paper we will study the black soot of carbon with certain amount of cement in order to get desired strength. At first, we will discuss about the varied property of carbon soot. And after that its strength by adding suitable percentage of soot to concrete. And at last we will discussed the properties.

Keywords. Carbon soot, Global warming, Concrete, Climate change, Pollution

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INTRODUCTION

Since there is a lot of pollution in environment which result in environmental hazardous problem such as pollution, excess carbon emission which ultimately results in global warming and many other issues. There is urgent need to solve the issue of environmental problems. One such material that can be used to control such problem is by the use of carbon soot . A unique property material which is black powdery material and is produced by burning of organic material. And can be found when incomplete burning of organic matter. It consist of polycyclic aromatic hydrocarbons.

The carbon soot can be used as replacement material in the concrete as it has unique property of being hygroscopic in nature, adhesive property and also has carbon content less than 50% and ash is 20%. Apart from that it is abundant and freely available in nature. It has an amazing property to make the surface cooler by absorbing sunlight and also reducing the sunlight amount which reaches the surface of earth. The other main reason for using of soot as a construction material because Chinese authorities have found that soot is one of the major factor for causing climate change in areas of higher altitude. The authority's states that this unique material is responsible for 25 percent of global warming and is still counting because of huge emission.



Figure 1 Carbon soot

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The idea discussed in this paper is entirely new and innovative. some amount of data has been extracted from several internet and research sources.

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