



# PERFORMANCE OF FOAM CONCRETE



A PROJECT REPORT

*Submitted By,*

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## BONAFIDE CERTIFICATE

Certified that this project report "PERFORMANCE OF FOAM CONCRETE" is the bonafide work of GOKULAKANNAN S, HARIPRASATH N, VIHASHINI who carried out the project work under my supervision.


  
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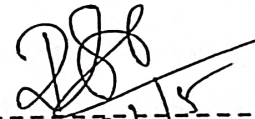
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## ABSTRACT

This project work which has been carried out to study about the performance of foam concrete in order to analyze the strength properties of this concrete. Because the advanced and modern materials which plays a major role in these concrete industry. So we have tried to analyze the performance of these foam concrete by analysing the strength properties of these concrete by adding foaming agent and different composition.

By doing the same these properties and result obtained from the tests which are compared with the strength properties of ordinary Portland cement concrete has been done to understand the nature.

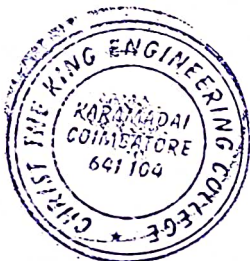
The project aims to investigate the mechanical properties like compressive strength and split tensile strength for grade of concrete. The specimens were tested at 7 days and 28 days.


In general concrete is strong in compression and weak in tensional property. The different applications of foam concrete were discussed in this study some of the advantages are thermal insulated, fire resistant, light weight etc,

To augment the properties of materials and improving their performances different materials which are need to be introduced, in which the foam concrete which has a light, strong, fire resistant, weather resistant ,attractive, impermeable material as needed.

### KEYWORDS:

Foaming Agent, Thermal insulated, light weight, acoustic , foam concrete.



  
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## CONCLUSION

With the addition of different volume of foaming agent from 0.02% to 0.04% and with 1% of super plasticizer & 0.8% of VMA by the weight of cement, the structural behavior of FOAM CONCRETE have been investigated. The following conclusions were drawn with reference to the results obtained in this investigation.

Workability of concrete decreases respectively by the increase in volume of fibers.

Even though the values get reduced, all the concrete mix we obtained are workable.

The maximum compressive strength of 33.92 N/mm<sup>2</sup> was obtaining at addition of foaming agent 0.03% of concrete, The percentage improvement of the compressive strength over the reference concrete is 5.66 %

The maximum split tensile strength of 2.64 N/mm<sup>2</sup> was obtaining at addition of foaming agent 0.03% of concrete, The percentage improvement of the split tensile strength over the reference concrete is 3.94 %

The maximum flexural strength of 8.0 N/mm<sup>2</sup> was obtaining at addition of foaming agent 0.03% of concrete, The percentage improvement of the flexural strength over the reference concrete is 11.12 %

After this experimental investigation, We have to conclude that incorporation of foaming agent by 0.03% of concrete has increased the strengths at 28 days by 5.66 % in compression, 3.94 % in tension, and 11.12 % in flexure. Finally we had concluded that addition of foaming agent by 0.03% of concrete should optimum and incorporation of foaming agent should increase the flexural strength than the compressive and tensile strength.



  
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