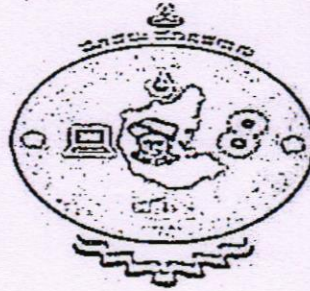


VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANASANGAMA, BELAGAVI-590018



2021-2022

PROJECT ON

**“EXPERIMENTAL INVESTIGATION ON REPLACEMENT OF
CEMENT BY FLYASH WITH ADDITION OF POLYPROPYLENE
FIBRE”**

Submitted in partial fulfilment of the requirements for the award of the degree of

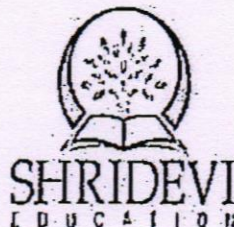
**BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING**

Submitted by:

| | |
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**Under the guidance of
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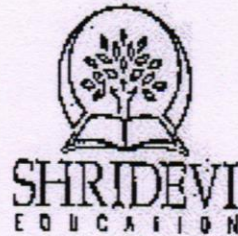
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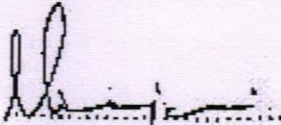
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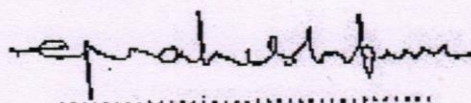


CERTIFICATE

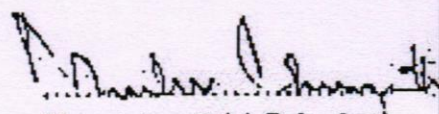
This is to be certified that the Project work entitled "EXPERIMENTAL INVESTIGATION ON REPLACEMENT OF CEMENT BY FLYASH WITH ADDITION OF POLYPROPYLENE FIBRE" is Carried out by Mr. CHANDAN GOWDA P (1SV18CV007) Mr. KIRAN KUMAR M T (1SV17CV009) , Ms. DEEPA R (1SV18CV011), Ms. JAYASHREE P (1SV18CV018), bonafide students of SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR in partial fulfillment for the award of degree Bachelor of Engineering in CIVIL ENGINEERING of VISVESVARAYA TECHNOLOGICAL UNIVERSITY, Belagavi during the year 2021-2022. It is certified that all corrections / Suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Project report has been approved as it satisfies the academic requirements in respect of Project on current topic prescribed for the Bachelor degree.


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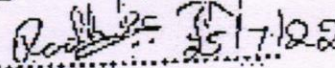
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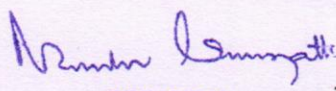
Name of the Examiners

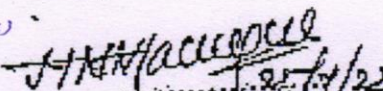
1. Radhika S.N.

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25/7/22


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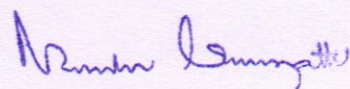

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ABSTRACT

Considerable efforts are being made in every part of the world to develop new construction materials. In the construction industry, concrete technology is heading towards entirely new era by the use of Fly Ash and fibers like Polypropylene Fibers in concrete. While conventional concrete has poor tensile strength, low resistant to tensile cracking, so its capacity to absorb energy is limited. The weakness in tension is conventionally overcome by strengthening their matrix with polypropylene fibrous materials. Concrete when mixed with fibers give fibrous concrete. The mechanical property of fibrous concrete is superior to that of ordinary concrete. Fly Ash will be evaluated for use as supplementary cementitious material in cement, the performance of Fly Ash will be compared to controlled mixtures and mixtures incorporating Fly Ash as partial replacement for cement.

The manifold benefits of usage of Fly Ash and Fibers in concrete are now well recognised. To improve the usage of Fly Ash and fibers in structural concrete studies on aspects such as compressive strength, split tensile strength are to be undertaken which will spread its usage.

In this investigation a study is carried on fly ash as partial replacement of cement with addition of 1% of polypropylene fibers. The cement are replaced by fly ash in different percentages such as 10%, 20%, 30% and 40%. The various strength properties studied are compressive strength and split tensile strength.



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