

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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PROJECT REPORT ON
"STUDY ON PERFORMANCE OF PERVIOUS
CONCRETE"

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

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

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CERTIFICATE

Certified that the project work entitled "STUDY ON PERFORMANCE OF PERVIOUS CONCRETE" is a bonafide work carried out by

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Are bonafide students of Department of Civil Engineering of Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in CIVIL ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2020-2021. 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 work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

Pervious concrete is a special type of concrete with a high porosity used for concrete flat work applications that allows water from precipitation and other sources to pass directly through, thereby reducing the runoff from a site and allowing the ground water recharge. It is an important application for sustainable construction and is of many low impact development techniques used by builders to protect the water quality. Pervious concrete includes other environmental benefits such as reduced noise generated by tire-pavement interaction, reduced urban heat, recharge of ground water table, reduced storm water runoff and preservation of native eco system.

The present study focused on assessment of properties of Ground Granular Blast Furnace Slag (GGBS) & polypropylene fiber based Pervious Concrete with different size of aggregates. The performance of the pervious concrete is measured in terms of compressive strength and permeability factor. Coarse aggregate size is varied in three sizes to study the effect of aggregate on the properties of pervious concrete. The results from the experiments revealed that the compressive strength is higher for the aggregate size 4.75 -10 mm at the end of 28 days compared to other mixes. The Co-efficient of Permeability is increased with respect to the increase in the aggregate size from 4.75 to 20 mm.