VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JnanaSangama" Belagavi – 590018

PROJECT REPORT
ON
"UTILIZATION OF COIR FIBRE AS A COMPONENT MATERIAL IN MANGALORE TILE"

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

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

Submitted By

Name	USN
ANANYA M H	4AL15CV013
JYOTHI S	4AL15CV039
MADHU BHAJANTRI	4AL15CV047
MOHAN KUMAR S PUJAR	4AL15CV060

Under the Guidance of
Ms. SWATHI
ASSISTANT PROFESSOR

ALVA'S
Education Foundation

DEPARTMENT OF CIVIL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI – 574 225, KARNATAKA

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(A unit of Alva's Education Foundation®, Moodbidri – 574 225)

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE

Certified that the project work entitled "**UTILIZATION OF COIR FIBRE AS A COMPONENT MATERIAL IN MANGALORE TILES**" *is a bona fide work carried out by*

ANANYA M H	**4AL15CV013**
JYOTHI S	**4AL15CV039**
MADHU BHAJANTRI	**4AL15CV047**
MOHANKUMAR S PUJAR	**4AL15CV060**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2018–2019. 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.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Prof. Swathi	**Dr. H. Ajith Hebbar**	**Dr. Peter Fernandes**
	Dept. of Civil Engineering Alva's Institute of Engg. & Technology Mijar, Moodbidri - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

In order to optimize the cost of construction, engineers have always been on the lookout for efficient and light roofing which requires minimum maintenance and labour to install. The use of randomly distributed short coir fibre reinforced composites as low cost materials for roofing, are discussed in this report. The fibre length, fibre volume and compacting pressure were the material parameters varied in order to obtain the optimum material.

Coir is a green building material and has potential as a raw material for the production of roofing materials like corrugated tiles. The main objective of the paper is to produce cost effective roofing tiles without compromising their quality using coir fibre. On the basis of the results, a composite with a fibre volume of 10% was considered to be the optimum composite. A comparison of material costs indicated that this composite tile was substantially cheaper than the ordinary Mangalore tile.

Keywords: Coco fibre, Breaking load test, Water absorption test, Permeability test